

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

SEP 24 2008

CERTIFIED MAIL 7005 1820 0002 2093 2935

Mr. Keith Gordon
Lion Copolymer Geismar LLC
P.O. Box 397
Geismar, LA 70734

RE: Lion Copolymer Geismar LLC
LAD 008 194 060
AI #1433 / PER20000002
Final Hazardous Waste Post-Closure Permit for the Former Waste Lagoon System Cell A

Dear Mr. Gordon:

Attached, is your copy of the Lion Copolymer Geismar, Final Hazardous Waste Post-Closure Permit, LAD 008194060-PC-RN-1, which incorporates language pertaining to the Post-Closure management of the Former Waste Lagoon System Cell A, at Lion Copolymer Geismar. The Responsiveness Summary at the back of the permit package includes all significant comments received during the comment period and the Department's response.

In accordance with Louisiana Revised Statute (La. R.S.) 30:2024, the Permittee may file with the Secretary, a request for hearing no later than thirty (30) days after the notice of the action is served. Under La. R.S. 30:2050.21, any person aggrieved by a final permit action may appeal to the Nineteenth Judicial District Court within thirty (30) days after the notice of the action has been given.

Please reference your Agency Interest Number 1433, EPA ID Number LAD 008 194 060 and Permit Activity Number PER20000002 on all future correspondence pertaining to this issue. If you have any questions concerning this matter, please contact Mr. Karl Leonards of the Waste Permits Division at (225) 219-3477.

Sincerely,

A handwritten signature in black ink, appearing to read "Cheryl", with a long, sweeping horizontal line extending to the right.

Cheryl Sonnier Nolan
Assistant Secretary
Office of Environmental Services

ale

Attachment

cc: Frank Edwards – CRA

SIGNATURE PAGE

FINAL PERMIT

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY HAZARDOUS WASTE POST-CLOSURE RENEWAL PERMIT

PERMITTEE: Lion Copolymer Geismar, LLC

PERMIT NUMBER: LAD 008194060-PC-RN-1
Former Waste Lagoon System- Cell A
Agency Interest # 1433/Activity # PER20000002

FACILITY LOCATION: 36191 Louisiana Highway 30, Ascension Parish
Geismar, Louisiana 70734

This permit is issued by the Louisiana Department of Environmental Quality (LDEQ) under the authority of the Louisiana Hazardous Waste Control Law R.S. 30:2171 et seq., and the regulations adopted thereunder and under the authority of the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) to Lion Copolymer Geismar, (hereafter called the Permittee), for the Geismar Facility located in Geismar, Louisiana, at latitude 30° 12' 060" and longitude 091° 00' 018."

For the purposes of this permit, the "Administrative Authority" shall be the Secretary of the Louisiana Department of Environmental Quality, or his/her designee.

The permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein and the applicable regulations contained in the Louisiana Administrative Code, Title 33, Part V, Subpart 1, (LAC 33:V.Subpart 1). Applicable regulations are those that are in effect on the effective date of issuance of this permit.

This permit is based on the assumption that the information provided to LDEQ by the Permittee is accurate. Further, this permit is based in part on the provisions of Sections 206, 212, and 224 of the HSWA of 1984, which modify Section 3004 and 3005 of RCRA. In particular, Section 206 requires corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage or disposal facility seeking a permit, regardless of the time at which waste was placed in such unit.

Section 212 provides authority to review and modify the permit at any time. Any inaccuracies found in the submitted information may be grounds for the termination, modification, revocation, and reissuance of this permit (see LAC 33:V.323) and potential enforcement action. The Permittee must

inform the LDEQ of any deviation from or changes in the information in the application that would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit shall be effective as of October 27, 2008, and shall remain in effect until October 27, 2018, unless revoked, reissued, modified or terminated in accordance with LAC 33:V.323 and 705 of the Louisiana Hazardous Waste Regulations. The Administrative Authority may issue any permit for a duration that is less than the maximum term of ten (10) years and the term shall not be extended beyond the maximum duration by modification in accordance with LAC 33:V.315.

Post-closure requirements of LAC 33:V. Subchapter B must continue for at least thirty (30) years after the date of closure for those units listed in Section II.O.1 of this permit. Expiration of this permit does not relieve the permittee of the responsibility to reapply for a permit for the remainder of the thirty (30) year post-closure care period.

Provisions of this permit may be appealed in writing pursuant to LA. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the Secretary elects to suspend other provisions as well. A request for hearing must be sent to the following:

Louisiana Department of Environmental Quality
Office of the Secretary
Attention: Hearings Clerk, Legal Services Division
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302



Cheryl Sonnier Nolan, Assistant Secretary
Louisiana Department of Environmental Quality

23 Sept 2008
Date

PUBLIC PARTICIPATION

PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
LION COPOLYMER GEISMAR, LLC , GEISMAR FACILITY
FORMER WASTE LAGOON SYSTEM CELL A
FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT

The LDEQ, Office of Environmental Services, has made the decision to issue the Hazardous Waste Post-Closure Permit for Lion Copolymer Geismar, LLC, P.O. Box 397, Geismar, LA 70734 for the Geismar Facility, Former Waste Lagoon System Cell A. **The facility is located at 36191 Hwy 30 Geismar, Ascension Parish.**

Under this Hazardous Waste Post-Closure Permit, Lion Copolymer Geismar, LLC will conduct post-closure care and maintenance of the engineered, closed, hazardous waste landfill, identified as Cell A. The Former Waste Lagoon System was made up of Cell A and Cell B. The Former Waste Lagoon System ceased operation in 1988 and was certified closed in 1990. During operation, the Former Waste Lagoon System received storm water from on site. During closure of the Former Waste Lagoon System, the waste was divided into two (2) sections, Cell A and Cell B; the waste in Cell B was placed in Cell A and capped. The original post closure permit (LAD 008194060-PC-1) for the Former Waste Lagoon System contained both Cell A and Cell B. On September 19, 2007, LDEQ approved Lion Copolymer's request to be released from post-closure care and maintenance requirements after completion of sixteen (16) of the thirty (30) years of post-closure care and maintenance for the Former Waste Lagoon System-Cell B.

The final permitting action and related documents are available for review and copying (all documents copied will be subject to a \$0.25 charge per copied page) at the LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

An additional copy of this action may be reviewed at the Ascension Parish Library, Gonzales Branch, 708 South Irma Blvd, Gonzales, LA 70737 and the Iberville Parish Library, East Iberville Branch, 5715 Monticello Street, St. Gabriel, LA 70776.

In accordance with Louisiana Revised Statutes (La R.S.) 30:2024, the Permittee may file with the secretary a request for a hearing no later than thirty (30) days after the notice of the action is served. Under La. R.S. 30:2050.21, any person aggrieved by a final permit action may appeal to the Nineteenth Judicial District Court within 30 days after the notice of the action has been given.

Previous notices have been published in the Gonzales Weekly Citizen and The Advocate on Friday, June 20, 2008.

Inquiries or requests for additional information regarding this permit action, should be directed to Karl Leonards, LDEQ, Waste Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3477.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at deqmaillistrequest@la.gov or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the issued permit and associated information can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm

All correspondence should specify AI Number 1433, Permit Number LAD 008194060-PC-RN-1, and Activity Number PER20000002.

Scheduled Publication Date: September 26, 2008 in The Gonzales Weekly Citizen and September 27, 2008 in The Advocate

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Phone: (225) 383-1111
Fax: (225) 388-0164

Ms. Susan Bush
Legal Advertising
The Advocate
P.O. Box 588
Baton Rouge, LA 70821-0588

Re: Final HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Ms. Bush:

Please publish the attached legal notice regarding the above referenced facility as a regular legal ad in THE ADVOCATE *once only* on Saturday, September 27, 2008. You will also receive a copy of the legal notice itself via email at: legal.ads@theadvocate.com.

Immediately after publication, please fax a copy of the ad to Ms. Laura Ambeau at (225) 325-8157.

State regulations require that we provide notification to the public and allow sufficient time for public comments. For this department to be assured that adequate notification is provided, we are requesting that you sign and date the enclosed 'Verification by Newspaper', and fax it to the attention of Ms. Laura Ambeau (225) 325-8157 immediately upon publication. If the notice cannot be published on the date requested, please contact Ms. Laura Ambeau (225) 219-3277 or email: laura.ambeau@la.gov.

The invoice for this public notice should be sent to:
Mr. Keith Gordon, Facility Contact
Lion Copolymer Geismar LLC, Geismar Facility
Post Office Box 397
36191 Highway 30
Geismar, LA 70734
Phone (225) 673-0783

The official proof of publication in the form of a tear sheet should be mailed to the attention of Ms. Laura Ambeau, LDEQ, Environmental Assistance Division, P.O. Box 4313, Baton Rouge, LA 70821-4313.

Thank you for assisting in our effort to serve the public.

Sincerely,

A handwritten signature in black ink, appearing to read "Laura Ambeau".

Laura Ambeau
Environmental Scientist, Public Participation Group

LA/Attachments/2

VERIFICATION BY NEWSPAPER

The undersigned verifies that the following public notice was published in the _____ (date of publication) edition of **The Advocate**:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

THE ADVOCATE

By: _____ Date: _____

Immediately upon publication please fax this form, along with a copy of the public notice as it appeared in the newspaper, to Ms. Laura Ambeau (225) 325-8157.

PLEASE NOTE

THIS VERIFICATION DOES NOT RELIEVE THE NEWSPAPER OF THE RESPONSIBILITY OF PROVIDING OFFICIAL PROOF OF PUBLICATION, IN THE FORM OF A TEAR SHEET, TO THE LDEQ AS R

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Phone: (225) 644-6397
Fax: (225) 644-2069
E-mail: graphics2@weeklycitizen.com

Ms. Aanifa Leblanc
Legal Advertising
Gonzales Weekly
Post Office Box 38
Gonzales, LA 70707
Via Fax (225) 388-0164

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Ms. Leblanc:

Please publish the attached legal notice regarding the above referenced facility as a regular legal ad in THE GONZALES WEEKLY *once only* on **Friday, September 26, 2008**. You will also receive a copy of the legal notice itself via email at: graphics2@weeklycitizen.com.

Immediately after publication, please fax a copy of the ad to Ms. Laura Ambeau at (225) 325-8157.

State regulations require that we provide notification to the public and allow sufficient time for public comments. For this department to be assured that adequate notification is provided, we are requesting that you sign and date the enclosed 'Verification by Newspaper', and fax it to the attention of Ms. Laura Ambeau (225) 325-8157 immediately upon publication. If the notice cannot be published on the date requested, please contact Ms. Laura Ambeau (225) 219-3277 or email: laura.ambeau@la.gov.

The invoice for this public notice should be sent to:

Mr. Keith Gordon, Facility Contact
Lion Copolymer Geismar LLC, Geismar Facility
Post Office Box 397
36191 Highway 30
Geismar, LA 70734
Phone (225) 673-0783

The official proof of publication in the form of a tear sheet should be mailed to the attention of Ms. Laura Ambeau, LDEQ, Environmental Assistance Division, P.O. Box 4313, Baton Rouge, LA 70821-4313.

Thank you for assisting in our effort to serve the public.

Sincerely,

A handwritten signature in black ink, appearing to read "Laura Ambeau".

Laura Ambeau
Environmental Scientist, Public Participation Group

LA/Attachments/2

VERIFICATION BY NEWSPAPER

The undersigned verifies that the following public notice was published in the _____ (date of publication) edition of **The Gonzales Weekly**:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

THE GONZALES WEEKLY

By: _____ Date: _____

Immediately upon publication please fax this form, along with a copy of the public notice as it appeared in the newspaper, to Ms. Laura Ambeau (225) 325-8157.

PLEASE NOTE

THIS VERIFICATION DOES NOT RELIEVE THE NEWSPAPER OF THE RESPONSIBILITY OF PROVIDING OFFICIAL PROOF OF PUBLICATION, IN THE FORM OF A TEAR SHEET, TO THE LDEQ AS REQUESTED IN OUR COVER LETTER.

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

SEP 24 2008

CERTIFIED MAIL 7005 1820 0002 2093 2935

Mr. Keith Gordon
Lion Copolymer Geismar LLC
P.O. Box 397
Geismar, LA 70734

RE: Lion Copolymer Geismar LLC
LAD 008 194 060
AI #1433 / PER20000002
Final Hazardous Waste Post-Closure Permit for the Former Waste Lagoon System Cell A

Dear Mr. Gordon:

Attached, is your copy of the Lion Copolymer Geismar, Final Hazardous Waste Post-Closure Permit, LAD 008194060-PC-RN-1, which incorporates language pertaining to the Post-Closure management of the Former Waste Lagoon System Cell A, at Lion Copolymer Geismar. The Responsiveness Summary at the back of the permit package includes all significant comments received during the comment period and the Department's response.

In accordance with Louisiana Revised Statute (La. R.S.) 30:2024, the Permittee may file with the Secretary, a request for hearing no later than thirty (30) days after the notice of the action is served. Under La. R.S. 30:2050.21, any person aggrieved by a final permit action may appeal to the Nineteenth Judicial District Court within thirty (30) days after the notice of the action has been given.

Please reference your Agency Interest Number 1433, EPA ID Number LAD 008 194 060 and Permit Activity Number PER20000002 on all future correspondence pertaining to this issue. If you have any questions concerning this matter, please contact Mr. Karl Leonards of the Waste Permits Division at (225) 219-3477.

Sincerely,

A handwritten signature in black ink, appearing to read "CSNolan", written over a horizontal line.

Cheryl Sonnier Nolan
Assistant Secretary
Office of Environmental Services

ale

Attachment

cc: Frank Edwards – CRA

VERIFICATION BY FACILITY

The undersigned verifies that the Lion Copolymer Geismar LLC has received a copy of the final hazardous waste post-closure permit and public notice regarding:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY

By: _____ Date: _____

Please complete and return this form promptly to the address listed below:

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
PO Box 4313
Baton Rouge, LA 70821-4313
Phone (225) 219-3277

FAX (225) 325-8157

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Telephone (225) 647-8924
Fax (225) 644-0063

Mr. Nate Stewart, Branch Manager
Ascension Parish Library
Gonzales Branch
708 South Irma Boulevard
Gonzales, LA 70737

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Mr. Stewart:

We request that the enclosed copy of the final hazardous waste post-closure permit and public notice/request for public comment for the referenced facility be made available for public review upon receipt. It is imperative that these documents are available for review at all times; therefore, they cannot be checked out by anyone at any time.

The documents should be retained during the permitting process. At the close of the permitting period, the Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ-OES), Permits Division, will provide written notice to you requesting that the information be removed.

Please complete the attached 'Verification by Library' and mail to Ms. Laura Ambeau, LDEQ-OES, Permits Division, Post Office Box 4313, Baton Rouge, Louisiana 70821-4313, or fax it to (225) 325-8157.

We appreciate your assistance in our efforts to serve the public. If you have any questions, please call Ms. Ambeau at (225) 219-3277.

Sincerely,

A handwritten signature in cursive script, appearing to read "Laura Ambeau".

Laura Ambeau
Environmental Scientist, Public Participation Group

LA

Attachments/2

VERIFICATION BY LIBRARY

The undersigned verifies that the Ascension Parish Library, Gonzales Branch has received a copy of the final hazardous waste post-closure permit and public notice/request for public comment for the following facility:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

ASCENSION PARISH LIBRARY, GONZALES BRANCH:

By: _____ Date: _____

Please complete and return this form promptly to the address listed below:

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
PHONE (225) 219-3277

FAX (225) 325-8157

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Telephone (225) 642-8380
Fax (225) 642-8381

Lydia Haydel, Director
Iberville Parish Library
East Iberville Branch
5715 Monticello Street
St. Gabriel, LA 70776

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Ms. Haydel:

We request that the enclosed copy of the final hazardous waste post-closure permit and public notice/request for public comment for the referenced facility be made available for public review upon receipt. It is imperative that these documents are available for review at all times; therefore, they cannot be checked out by anyone at any time.

The copy of these documents should be retained during the permitting process. At the close of the permitting period, the Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ-OES), Permits Division, will provide written notice to you requesting that the information be removed.

Please complete the attached 'Verification by Library' and mail to Ms. Laura Ambeau, LDEQ-OES, Permits Division, Post Office Box 4313, Baton Rouge, Louisiana 70821-4313, or fax it to (225) 325-8157.

We appreciate your assistance in our efforts to serve the public. If you have any questions, please call Ms. Ambeau at (225) 219-3277.

Sincerely,

A handwritten signature in cursive script, appearing to read "Laura Ambeau".

Laura Ambeau
Environmental Scientist, Public Participation Group

LA

Attachments/2

VERIFICATION BY LIBRARY

The undersigned verifies that the Iberville Parish Library, East Iberville Branch has received a copy of the final hazardous waste post-closure permit and public notice/request for public comment for the following facility:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

IBERVILLE PARISH LIBRARY, EAST IBERVILLE BRANCH:

By: _____ Date: _____

Please complete and return this form promptly to the address listed below:

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313
PHONE (225) 219-3277

FAX (225) 325-8157

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Tommy Martinez, Parish President
Gonzales, Ascension Parish, LA
208 Railroad Avenue, # 2
Gonzales, LA 70707
Phone (225) 621-5709

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Mr. Martinez:

The Louisiana Department of Environmental Quality (LDEQ) is enclosing for your reference, a copy of the final hazardous waste post-closure permit and public notice/request for public comment for the referenced facility that is scheduled to be published in The Advocate on September 27, 2008 and The Gonzales Weekly on September 26, 2008.

Should you have any questions regarding the facility, additional permit information may be obtained from Mr. Karl Leonards, LDEQ, Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, telephone (225) 219-3477.

Sincerely,

A handwritten signature in cursive script, reading "Laura M. Ambeau".

Laura M. Ambeau
Environmental Scientist, Public Participation Group

LA

Enclosures/2

VERIFICATION BY LOCAL GOVERNMENT

The undersigned verifies that the copy of the final hazardous waste post-closure permit and public notice/request for public comment for the referenced facility regarding has been received:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Ascension Parish Government:

By: _____ Date: _____

Please complete and return this form promptly to the address listed below:

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
PO Box 4313
Baton Rouge, LA 70821-4313
PHONE (225) 219-3277

FAX (225) 325-8157

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Phone: (225) 219-3600
fax: (225) 219-3695

Mr. Bobby Mayweather
Capital Regional Office
602 North 5th Street
Baton Rouge, La. 70821-4312

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Mr. Mayweather:

The Louisiana Department of Environmental Quality (LDEQ) is enclosing for your reference, a copy of the final hazardous waste post-closure permit and public notice/request for public comment for the referenced facility that is scheduled to be published in The Advocate on September 27, 2008 and The Gonzales Weekly on September 26, 2008.

The copy of these documents should be retained during the permitting process. At the close of the permitting period, the Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ-OES), Permits Division, will provide written notice to you requesting that the information be removed.

Should you have any questions regarding the facility, additional permit information may be obtained from Mr. Karl Leonards, LDEQ, Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, telephone (225) 219-3477.

Sincerely,

A handwritten signature in cursive script, reading "Laura Ambeau".

Laura Ambeau
Environmental Scientist, Public Participation Group

LA/Enclosures

VERIFICATION BY REGIONAL OFFICE

The undersigned verifies that the Capital Regional Office has received a copy of the final hazardous waste post-closure permit and public notice regarding:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Capital Regional Office:

By: _____ Date: _____

Please complete and return this form promptly to the address listed below:

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
PO Box 4313
Baton Rouge, LA 70821-4313
Phone (225) 219-3277

FAX (225) 325-8157



State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

September 24, 2008

Mr. Kishor Fruitwala
U. S. EPA, Region VI
1445 Ross Avenue, Suite 1200
Mail Code: 6PDA
Dallas, Texas 75202-2733

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

Dear Mr. Fruitwala:

The Louisiana Department of Environmental Quality (LDEQ) is enclosing for your reference, a copy of the final hazardous waste post-closure permit renewal and legal notice that is scheduled to be published in The Gonzales Weekly Citizen on September 26, 2008 and The Advocate on September 27, 2008.

Should you have any questions regarding the facility, additional permit information may be obtained from Mr. Karl Leonards, LDEQ, Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, telephone (225) 219-3477.

Sincerely,

A handwritten signature in cursive script, appearing to read "Laura Ambeau".

Laura Ambeau
Environmental Scientist, Public Participation Group

LA
Enclosures

VERIFICATION BY EPA

The undersigned verifies that the EPA Region VI Office has received a copy of the final hazardous waste post-closure permit renewal and public notice regarding:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

EPA Region VI:

By: _____ Date: _____

Please complete and return this form promptly to the address listed below:

Ms. Laura Ambeau
Louisiana Department of Environmental Quality
Office of Environmental Services
Environmental Assistance Division
PO Box 4313
Baton Rouge, LA 70821-4313
Phone (225) 219-3277

FAX (225) 325-8157

VERIFICATION FOR DELIVERY OF MATERIAL TO BE SCANNED

THIS INFORMATION IS EXPECTED TO BE AVAILABLE ON EDMS
48 HOURS FROM THE DELIVERY DATE

Public Notice Date: Friday, September 26, 2008

The undersigned verifies that a copy of final hazardous waste post-closure permit and public notice for the referenced facility has been received by the First Floor Scanning Center:

Re: FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT
FOR THE FORMER WASTE LAGOON SYSTEM CELL A
LION COPOLYMER GEISMAR LLC, GEISMAR FACILITY
GEISMAR, ASCENSION PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 1433, PERMIT NO. LAD 008 194 060, PER20000002

FIRST FLOOR SCANNING CENTER:

The Material Was Delivered:

By: _____ Date: _____
_____ Time _____

.....

The Public Participation Group contact for this packet of information is
Laura Ambeau, Rm. 321-31, 2-3277

PART A

APPLICATION

| | | | |
|--|---|--|--|
| SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office. | United States Environmental Protection Agency | | |
| | RCRA SUBTITLE C SITE IDENTIFICATION FORM | | |
| 1. Reason for Submittal (See instructions on page 14.) MARK ALL BOX(ES) THAT APPLY | Reason for Submittal: <input type="checkbox"/> To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities) <input type="checkbox"/> To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) <input type="checkbox"/> As a component of a First RCRA Hazardous Waste Part A Permit Application <input checked="" type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # _____) <input type="checkbox"/> As a component of the Hazardous Waste Report | | |
| 2. Site EPA ID Number (page 15) | EPA ID Number L A D 0 0 8 1 9 4 0 6 0 | | |
| 3. Site Name (page 15) | Name: Lion Copolymer Geismar, LLC | | |
| 4. Site Location Information (page 15) | Street Address: 36191 Louisiana Highway 30 | | |
| | City, Town, or Village: Geismar | State: LA | |
| | County Name: Ascension | Zip Code: 70734 | |
| 5. Site Land Type (page 15) | Site Land Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other | | |
| 6. North American Industry Classification System (NAICS) Code(s) for the Site (page 15) | A. 3 2 5 1 9 9 3 2 5 1 9 9 | B. 3 2 5 2 1 2 3 2 5 2 1 2 | |
| | C. 3 2 5 3 2 0 3 2 5 3 2 0 | D. | |
| 7. Site Mailing Address (page 16) | Street or P. O. Box: Post Office Box 397 | | |
| | City, Town, or Village: Geismar | | |
| | State: LA | | |
| | Country: Ascension | Zip Code: 70734 | |
| 8. Site Contact Person (page 16) | First Name: Keith | MI: | Last Name: Gordon |
| | Phone Number: (225) 673-0783 Extension: | | Email address: keith.gordon@lioncopolymer.com |
| 9. Operator and Legal Owner of the Site (pages 16 and 17) | A. Name of Site's Operator: Lion Copolymer Geismar, LLC | | Date Became Operator (mm/dd/yyyy): 06/29/2007 |
| | Operator Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other | | |
| | B. Name of Site's Legal Owner: Lion Copolymer Geismar, LLC | | Date Became Owner (mm/dd/yyyy): 06/29/2007 |
| | Owner Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other | | |

| | | |
|--|-----------------------------------|-----------------|
| 9. Legal Owner (Continued) Address | Street or P. O. Box: P.O. Box 397 | |
| | City, Town, or Village: Geismar | |
| | State: LA | |
| | Country: Ascension | Zip Code: 70734 |

10. Type of Regulated Waste Activity

Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 18 to 21.)

A. Hazardous Waste Activities

Complete all parts for 1 through 6.

Y ☒ N ☐ 1. Generator of Hazardous Waste

If "Yes", choose only one of the following - a, b, or c.

☒ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.)
of non-acute hazardous waste; or☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.)
of non-acute hazardous waste; or☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.)
of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☒ d. United States Importer of Hazardous WasteY ☐ N ☒ e. Mixed Waste (hazardous and radioactive) GeneratorY ☐ N ☒ 2. Transporter of Hazardous WasteY ☐ N ☒ 3. Treater, Storer, or Disposer of
Hazardous Waste (at your site) Note:
A hazardous waste permit is required for
this activity.Y ☐ N ☒ 4. Recycler of Hazardous Waste (at your
site)Y ☐ N ☒ 5. Exempt Boiler and/or Industrial
Furnace

If "Yes", mark each that applies.

☐ a. Small Quantity On-site Burner
Exemption☐ b. Smelting, Melting, and Refining
Furnace ExemptionY ☐ N ☒ 6. Underground Injection Control

B. Universal Waste Activities

Y ☐ N ☒ 1. Large Quantity Handler of Universal Waste (accumulate
5,000 kg or more) [refer to your State regulations to
determine what is regulated]. Indicate types of universal
waste generated and/or accumulated at your site. If "Yes",
mark all boxes that apply:

| | <u>Generate</u> | <u>Accumulate</u> |
|--------------------------|--------------------------|--------------------------|
| a. Batteries | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Pesticides | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Thermostats | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Lamps | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Other (specify) _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Other (specify) _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Other (specify) _____ | <input type="checkbox"/> | <input type="checkbox"/> |

Y ☐ N ☒ 2. Destination Facility for Universal Waste

Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

Mark all boxes that apply.

Y ☐ N ☒ 1. Used Oil Transporter
If "Yes", mark each that applies.☐ a. Transporter
☐ b. Transfer FacilityY ☐ N ☒ 2. Used Oil Processor and/or Re-refiner
If "Yes", mark each that applies.☐ a. Processor
☐ b. Re-refinerY ☐ N ☒ 3. Off-Specification Used Oil BurnerY ☐ N ☒ 4. Used Oil Fuel Marketer

If "Yes", mark each that applies.

☐ a. Marketer Who Directs Shipment of
Off-Specification Used Oil to
Off-Specification Used Oil Burner
☐ b. Marketer Who First Claims the
Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 22.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

| | | | | | | |
|------|------|------|------|------|------|------|
| D001 | D002 | D003 | D005 | D006 | D007 | D008 |
| D009 | D011 | D018 | D019 | D021 | D022 | D024 |
| D025 | D026 | D028 | D029 | D033 | D035 | D039 |

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

| | | | | | | |
|--|--|--|--|--|--|--|
| | | | | | | |
| | | | | | | |
| | | | | | | |

12. Comments (See instructions on page 22.)

This Part A Hazardous Waste Permit Application is included with the submittal of a RCRA Post-Closure Permit Renewal Application for Cell A of the Former Waste Lagoon System at the Lion Copolymer Geismar, LLC Geismar Facility. Cell A is an engineered, closed, hazardous waste landfill. Cell A does not generate or receive any wastes. The waste and process codes included in Part A Application represent the wastes that were formerly disposed in Cell A and/or wastes generated at the Lion Copolymer Geismar, LLC Facility as a whole and do not indicate any current operations within the Former Waste Lagoon System. Cell B was formerly included in the post-closure permit but has since received a No Further Action-At This Time assessment from the LDEQ.

Continued from Section 11.A: D040, D043, F001, F002, F003, F004, F005, P012, P020, P022, P068, P076, P078, P098, P105, P205, U002, U003, U008, U012, U019, U021, U031, U037, U052, U057, U063, U070, U077, U080, U098, U108, U112, U117, U122, U123, U133, U135, U138, U144, U147, U148, U151, U154, U159, U161, U169, U170, U188, U190, U196, U201, U211, U213, U218, U220, U239, U244, U328, U404

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11). (See instructions on page 22.)

| Signature of operator, owner, or an authorized representative | Name and Official Title (type or print) | Date Signed (mm/dd/yyyy) |
|---|---|--------------------------|
| Philip F. Spillane | Philip Spillane, Plant Manager | 03/17/2008 |
| | | |
| | | |

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

| | | | | | |
|--|--|--|-----------------|-----------------------------|----------------|
| 1. Facility Permit Contact (See instructions on page 23) | First Name: Keith | | MI: | Last Name: Gordon | |
| | Phone Number: (225) 673-0783 | | | Phone Number Extension: | |
| 2. Facility Permit Contact Mailing Address (See instructions on page 23) | Street or P.O. Box: P.O. Box 397 | | | | |
| | City, Town, or Village: Geismar | | | | |
| | State: LA | | | | |
| | Country: USA | | | Zip Code: 70734 | |
| 3. Operator Mailing Address and Telephone Number (See instructions on page 23) | Street or P.O. Box: P.O. Box 397 | | | | |
| | City, Town, or Village: Geismar | | | | |
| | State: LA | | | | |
| | Country: USA | | Zip Code: 70734 | Phone Number (225) 673-0783 | |
| 4. Owner Mailing Address and Telephone Number (See instructions on page 23) | Street or P.O. Box: P.O. Box 397 | | | | |
| | City, Town, or Village: Geismar | | | | |
| | State: LA | | | | |
| | Country: USA | | Zip Code: 70734 | Phone Number (225) 673-0783 | |
| 5. Facility Existence Date (See instructions on page 24) | Facility Existence Date (mm/dd/yyyy): 02/01/1962 | | | | |
| 6. Other Environmental Permits (See instructions on page 24) (See attached list on Table 1) | | | | | |
| A. Permit Type (Enter code) | B. Permit Number | | | | C. Description |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 7. Nature of Business (Provide a brief description; see instructions on page 24) | | | | | |
| The Lion Copolymer Geismar, LLC-Geismar Facility is an integrated chemical production facility that produces EPDM synthetic rubber and chemicals used in the manufacturing of rubber products. | | | | | |

TABLE J
LIST OF ENVIRONMENTAL PERMITS
LION COPOLYMER GEISMAR, LLC

| A. Permit Type (Enter Code) | B. Permit Number | C. Description |
|--------------------------------|-------------------|--|
| | | |
| E | 2572-V4 | Air Permit |
| E | 514C-V2 | Air Permit |
| E | 2242-V1 | Air Permit |
| E | 2292-V1 | Air Permit |
| E | 2333-V1 | Air Permit |
| E | 2327-V2 | Air Permit |
| E | 2531-V1 | Air Permit |
| E | 2041-V0 | Air Permit |
| E | 2551-V1 | Air Permit |
| E | 2305-V1 | Air Permit |
| E | 2099-V2 | Air Permit |
| E | 1186-V0 | Air Permit |
| E | 3041-V0 | Air Permit |
| E | LA0000752 | Louisiana Pollutant Discharge Elimination System Permit |
| R | LAD008194060-PC-1 | Hazardous Waste Permit |
| R | G-005-2103 | Solid Waste Generator Number |

PA ID NO: L A D 0 0 8 1 9 4 0 6 0

OMB #: 2050-0034 Expires 11/30/2005

8 Process Codes and Design Capacities (See Instructions on page 24) Enter information in the Sections on Form Page 3

A. PROCESS CODE - Enter the code from the list of process codes in the table below that best describes each process to be used at the facility. Fifteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), enter the process information in Item 9 (including a description).

B. PROCESS DESIGN CAPACITY - For each code entered in Section A, enter the capacity of the process.

1. AMOUNT - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.

2. UNIT OF MEASURE - For each amount entered in Section B(1), enter the code in Section B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

| PROCESS CODE | PROCESS | APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY | PROCESS CODE | PROCESS | APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY |
|--------------|---|---|--------------|--|---|
| D79 | <u>Disposal:</u> Underground Injection Well Disposal | Gallons; Liters; Gallons Per Day; or Liters Per Day | T81 | <u>Treatment (continued):</u> Cement Kiln | For T81-T93: |
| D80 | Landfill | Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards | T82 | Lime Kiln | |
| D81 | Land Treatment | Acres or Hectares | T83 | Aggregate Kiln | Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour |
| D82 | Ocean Disposal | Gallons Per Day or Liters Per Day | T84 | Phosphate Kiln | |
| D83 | Surface Impoundment Disposal | Gallons; Liters; Cubic Meters; or Cubic Yards | T85 | Coke Oven | |
| D99 | Other Disposal | Any Unit of Measure in Code Table Below | T86 | Blast Furnace | |
| S01 | <u>Storage:</u> Container | Gallons; Liters; Cubic Meters; or Cubic Yards | T87 | Smelting, Melting, or Refining Furnace | Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour |
| | Tank Storage | Gallons; Liters; Cubic Meters; or Cubic Yards | T88 | Titanium Dioxide Chloride Oxidation Reactor | |
| | Waste Pile | Cubic Yards or Cubic Meters | T89 | Methane Reforming Furnace | |
| S04 | Surface Impoundment Storage | Gallons; Liters; Cubic Meters; or Cubic Yards | T90 | Pulping Liquor Recovery Furnace | |
| S05 | Drip Pad | Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards | T91 | Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid | |
| S06 | Containment Building Storage | Cubic Yards or Cubic Meters | T92 | Halogen Acid Furnaces | |
| S99 | Other Storage | Any Unit of Measure in Code Table Below | T93 | Other Industrial Furnaces Listed In 40 CFR §260.10 | |
| T01 | <u>Treatment:</u> Tank Treatment | Gallons Per Day; Liters Per Day | T94 | Containment Building - Treatment | Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour |
| T02 | Surface Impoundment Treatment | Gallons Per Day; Liters Per Day | | <u>Miscellaneous (Subpart X):</u> | |
| T03 | Incinerator | Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour | X01 | Open Burning/Open Detonation | Any Unit of Measure in Code Table Below |
| T04 | Other Treatment | Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour | X02 | Mechanical Processing | Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day |
| T80 | Boiler | Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour | X03 | Thermal Unit | Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour |
| | | | X04 | Geologic Repository | Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters |
| | | | X99 | Other Subpart X | Any Unit of Measure Listed Below |

| UNIT OF MEASURE | UNIT OF MEASURE CODE | UNIT OF MEASURE | UNIT OF MEASURE CODE | UNIT OF MEASURE | UNIT OF MEASURE CODE |
|-----------------------|----------------------|---------------------------|----------------------|--------------------|----------------------|
| Gallons Per Hour..... | G | Short Tons Per Hour..... | D | Cubic Yards..... | Y |
| Liters Per Hour..... | E | Metric Tons Per Hour..... | W | Cubic Meters..... | C |
| Gallons Per Day..... | U | Short Tons Per Day..... | N | Acres..... | B |
| Liters Per Day..... | L | Metric Tons Per Day..... | S | Acre-feet..... | A |
| Liters Per Hour..... | H | Pounds Per Hour..... | J | Hectares..... | Q |
| Liters Per Day..... | V | Kilograms Per Hour..... | R | Hectare-meter..... | F |
| | | Million Btu Per Hour..... | X | Btu Per Hour..... | I |

LAID NO: L A D 0 0 8 1 9 4 0 6 0

OMB #: 2050-0034 Expires 11/30/2005

Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

| Line Number | A. Process Code (From list above) | | | | B. PROCESS DESIGN CAPACITY | | C. Process Total Number of Units | For Official Use Only |
|-------------|--------------------------------------|---|---|--|---|-------------------------------------|----------------------------------|-----------------------|
| | | | | | (1) Amount (Specify) | (2) Unit of Measure (Enter code) | | |
| X 1 | S | 0 | 2 | | 5 3 3 . 7 8 8 | G | 0 0 1 | |
| 1 | D | 8 | 0 | | Cell A of the Former Waste Lagoon System encompasses approximately 2.5 acres. | Y | 001 | |
| 2 | | | | | Cell A is an engineered, CLOSED hazardous waste landfill and does not currently generate or receive any wastes. | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 1 0 | | | | | | | | |
| 1 1 | | | | | | | | |
| 1 2 | | | | | | | | |
| 1 3 | | | | | | | | |

NOTE: If you need to list more than 15 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

Other Processes (See instructions on page 25 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes)

| Line Number Enter #s in sequence with Item 8 | A. Process Code (From list above) | | | | B. PROCESS DESIGN CAPACITY | | C. Process Total Number of Units | D. Description of Process |
|---|--------------------------------------|---|---|--|----------------------------|-------------------------------------|----------------------------------|---------------------------|
| | | | | | (1) Amount (Specify) | (2) Unit of Measure (Enter code) | | |
| X 2 | T | 0 | 4 | | 1 0 0 . 0 0 0 | U | 0 0 1 | In-situ Vitrification |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

EPA ID NO: L A D 0 0 8 1 9 4 0 6 0

OMB #: 2050-0034 Expires 11/30/2005

Description of Hazardous Wastes: (See instructions on page 25) - Enter information in the Sections on Form Page 5.

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in Section A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Section A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in Section B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

| ENGLISH UNIT OF MEASURE | CODE | METRIC UNIT OF MEASURE | CODE |
|-------------------------|------|------------------------|------|
| POUNDS | P | KILOGRAMS | K |
| TONS | T | METRIC TONS | M |

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. Enter the first two as described above.
2. Enter "000" in the extreme right box of Item 10.D(1).
3. Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in Section A. On the same line complete Sections B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In Section A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Section D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

| will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be as follows: | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---------------------------------------|---------------------------------|--------------|---|---|---|---|---|--|--|--|---------------------|
| Line Number | A. EPA Hazardous Waste No. (Enter code) | | | | B. Estimated Annual Quantity of Waste | C. Unit of Measure (Enter code) | D. PROCESSES | | | | | | | | | |
| | (1) PROCESS CODES (Enter code) | | | | | | | | | | (2) PROCESS DESCRIPTION- (If a code is not entered in D(1)) | | | | | |
| X-1 | K | 0 | 5 | 4 | 900 | P | T | 0 | 3 | D | 8 | 0 | | | | |
| X-2 | D | 0 | 0 | 2 | 400 | P | T | 0 | 3 | D | 8 | 0 | | | | |
| X-3 | D | 0 | 0 | 1 | 100 | P | T | 0 | 3 | D | 8 | 0 | | | | |
| X-4 | D | 0 | 0 | 2 | | | | | | | | | | | | Included With Above |

EPA ID NO: L A D 0 0 8 1 9 4 0 6 0

OMB #: 2050-0034 Expires 11/30/2005

Description of Hazardous Wastes (Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)

| Line Number | A. EPA Hazardous Waste No. (Enter code) | B. Estimated Annual Quantity of Waste | C. Unit of Measure (Enter code) | D. PROCESSES | | | | | | | | | | | | |
|-------------|---|---|--|--------------------------------|---|---|---|--|--|--|--|--|--|--|--|---|
| | | | | (1) PROCESS CODES (Enter code) | | | | | | | | | | | | (2) PROCESS DESCRIPTION (If a code is not entered in D(1)) |
| | 1 | D 0 0 1 | 0 | P | D | 8 | 0 | | | | | | | | | CLOSED |
| | 2 | D 0 0 2 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 3 | D 0 0 3 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 4 | D 0 0 5 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 5 | D 0 0 6 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 6 | D 0 0 7 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 7 | D 0 0 8 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 8 | D 0 0 9 | 0 | P | D | 8 | 0 | | | | | | | | | |
| | 9 | D 0 1 1 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 0 | D 0 1 8 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 1 | D 0 1 9 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 2 | D 0 2 1 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 3 | D 0 2 2 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 4 | D 0 2 4 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 5 | D 0 2 5 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 6 | D 0 2 6 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 7 | D 0 2 8 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 8 | D 0 2 9 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 1 | 9 | D 0 3 3 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 0 | D 0 3 5 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 1 | D 0 3 9 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 2 | D 0 4 0 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 3 | D 0 4 3 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 4 | F 0 0 1 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 5 | F 0 0 2 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 6 | F 0 0 3 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 7 | F 0 0 4 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 8 | F 0 0 5 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 2 | 9 | P 0 1 2 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 0 | P 0 2 0 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 1 | P 0 2 2 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 2 | P 0 6 8 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 3 | P 0 7 6 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 4 | P 0 7 8 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 5 | P 0 9 8 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 6 | P 1 0 5 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 7 | P 2 0 5 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 8 | U 0 0 2 | 0 | P | D | 8 | 0 | | | | | | | | | |
| 3 | 9 | U 0 0 3 | 0 | P | D | 8 | 0 | | | | | | | | | |

EPA ID NO: L A D 0 0 8 1 9 4 0 6 0

OMB #: 2050-0034 Expires 11/30/2005

Description of Hazardous Wastes (Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)

| Line Number | A. EPA Hazardous Waste No. (Enter code) | | | | B. Estimated Annual Quantity of Waste | C. Unit of Measure (Enter code) | D. PROCESSES | | | | | | | | | | (2) PROCESS DESCRIPTION (If a code is not entered in D(1)) |
|-------------|---|---|---|---|---------------------------------------|---------------------------------|--------------|---|---|--|--|--|--|--|--|--|--|
| | (1) PROCESS CODES (Enter code) | | | | | | | | | | | | | | | | |
| 1 | U | 0 | 0 | 8 | 0 | P | D | 8 | 0 | | | | | | | | CLOSED |
| 2 | U | 0 | 1 | 2 | 0 | P | D | 8 | 0 | | | | | | | | |
| 3 | U | 0 | 1 | 9 | 0 | P | D | 8 | 0 | | | | | | | | |
| 4 | U | 0 | 2 | 1 | 0 | P | D | 8 | 0 | | | | | | | | |
| 5 | U | 0 | 3 | 1 | 0 | P | D | 8 | 0 | | | | | | | | |
| 6 | U | 0 | 3 | 7 | 0 | P | D | 8 | 0 | | | | | | | | |
| 7 | U | 0 | 5 | 2 | 0 | P | D | 8 | 0 | | | | | | | | |
| 8 | U | 0 | 5 | 7 | 0 | P | D | 8 | 0 | | | | | | | | |
| 9 | U | 0 | 6 | 3 | 0 | P | D | 8 | 0 | | | | | | | | |
| 10 | U | 0 | 7 | 0 | 0 | P | D | 8 | 0 | | | | | | | | |
| 11 | U | 0 | 7 | 7 | 0 | P | D | 8 | 0 | | | | | | | | |
| 12 | U | 0 | 8 | 0 | 0 | P | D | 8 | 0 | | | | | | | | |
| 13 | U | 0 | 9 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 14 | U | 1 | 0 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 15 | U | 1 | 1 | 2 | 0 | P | D | 8 | 0 | | | | | | | | |
| 16 | U | 1 | 1 | 7 | 0 | P | D | 8 | 0 | | | | | | | | |
| 17 | U | 1 | 2 | 2 | 0 | P | D | 8 | 0 | | | | | | | | |
| 18 | U | 1 | 2 | 3 | 0 | P | D | 8 | 0 | | | | | | | | |
| 19 | U | 1 | 3 | 3 | 0 | P | D | 8 | 0 | | | | | | | | |
| 20 | U | 1 | 3 | 5 | 0 | P | D | 8 | 0 | | | | | | | | |
| 21 | U | 1 | 3 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 22 | U | 1 | 4 | 4 | 0 | P | D | 8 | 0 | | | | | | | | |
| 23 | U | 1 | 4 | 7 | 0 | P | D | 8 | 0 | | | | | | | | |
| 24 | U | 1 | 4 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 25 | U | 1 | 5 | 1 | 0 | P | D | 8 | 0 | | | | | | | | |
| 26 | U | 1 | 5 | 4 | 0 | P | D | 8 | 0 | | | | | | | | |
| 27 | U | 1 | 5 | 9 | 0 | P | D | 8 | 0 | | | | | | | | |
| 28 | U | 1 | 6 | 1 | 0 | P | D | 8 | 0 | | | | | | | | |
| 29 | U | 1 | 6 | 9 | 0 | P | D | 8 | 0 | | | | | | | | |
| 30 | U | 1 | 7 | 0 | 0 | P | D | 8 | 0 | | | | | | | | |
| 31 | U | 1 | 8 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 32 | U | 1 | 9 | 0 | 0 | P | D | 8 | 0 | | | | | | | | |
| 33 | U | 1 | 9 | 6 | 0 | P | D | 8 | 0 | | | | | | | | |
| 34 | U | 2 | 0 | 1 | 0 | P | D | 8 | 0 | | | | | | | | |
| 35 | U | 2 | 1 | 1 | 0 | P | D | 8 | 0 | | | | | | | | |
| 36 | U | 2 | 1 | 3 | 0 | P | D | 8 | 0 | | | | | | | | |
| 37 | U | 2 | 1 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 38 | U | 2 | 2 | 0 | 0 | P | D | 8 | 0 | | | | | | | | |
| 39 | U | 2 | 3 | 9 | 0 | P | D | 8 | 0 | | | | | | | | |

EPA ID NO: L A D 0 0 8 1 9 4 0 6 0

OMB #: 2050-0034 Expires 11/30/2005

Description of Hazardous Wastes (Continued... Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)

| Line Number | A. EPA Hazardous Waste No. (Enter code) | | | | B. Estimated Annual Quantity of Waste | C. Unit of Measure (Enter code) | D. PROCESSES | | | | | | | | | | (2) PROCESS DESCRIPTION (If a code is not entered in D(1)) |
|-------------|---|---|---|---|---------------------------------------|---------------------------------|--------------------------------|---|---|--|--|--|--|--|--|--|--|
| | 1 | 2 | 3 | 4 | | | (1) PROCESS CODES (Enter code) | | | | | | | | | | |
| 1 | U | 2 | 4 | 4 | 0 | P | D | 8 | 0 | | | | | | | | CLOSED |
| 2 | U | 3 | 2 | 8 | 0 | P | D | 8 | 0 | | | | | | | | |
| 3 | U | 4 | 0 | 4 | 0 | P | D | 8 | 0 | | | | | | | | |
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| 38 | | | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | | | |

L A D 0 0 8 1 9 4 0 6 0
EPA ID NO: | | | | | | | | | | | |

OMB #: 2050-0034 Expires 11/30/2005

(See instructions on pages 25 and 26) (See Figure 1)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility; the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 26) (See Figure 2)

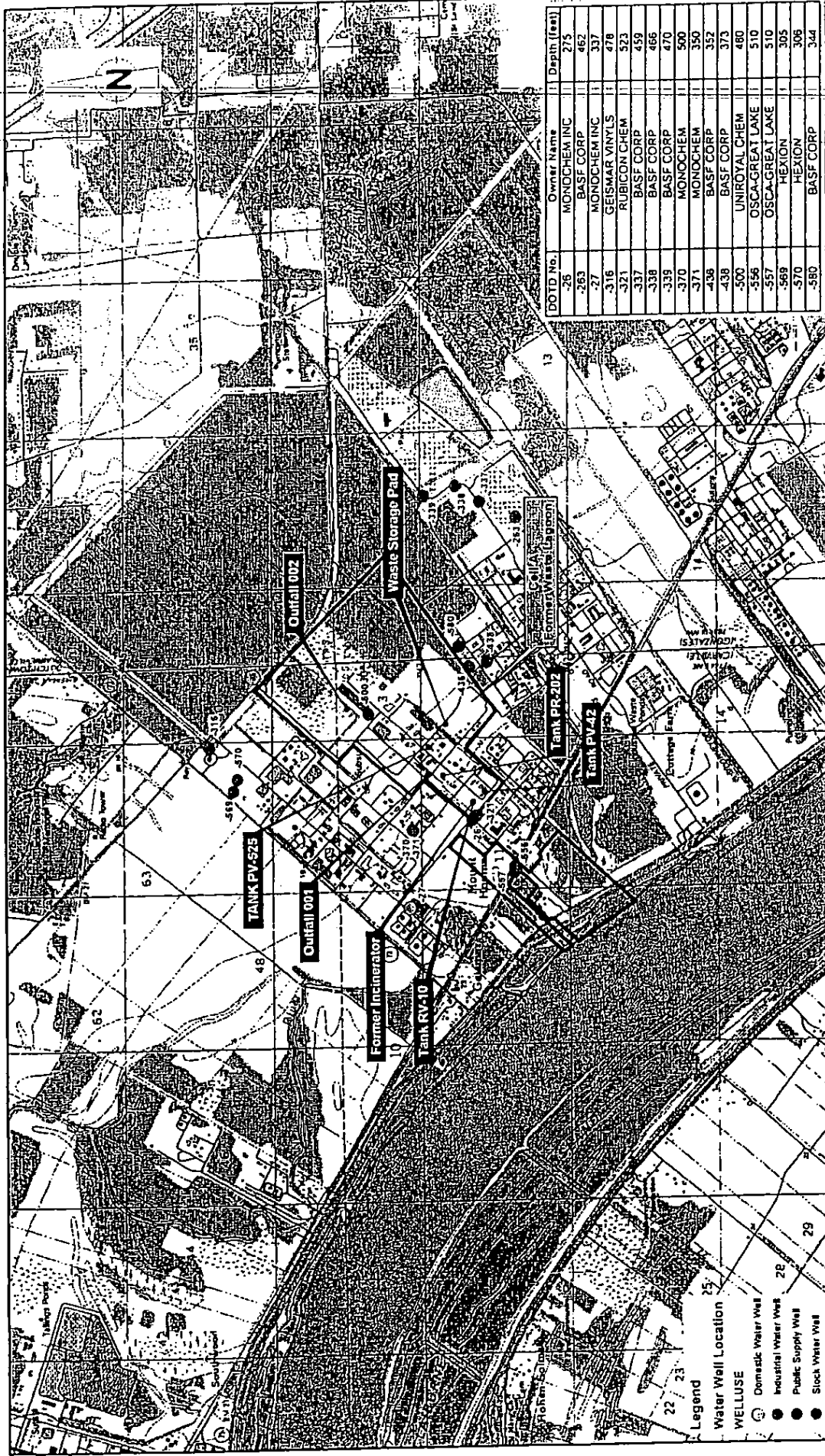
All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 26) (See Figure 2)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

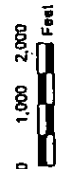
14. Comments (See instructions on page 26)

This Part A Hazardous Waste Permit Application is included with the submittal of a RCRA Post-Closure Permit Renewal Application for Cell A of the Former Waste Lagoon System at the Lion Copolymer Geismar, LLC Geismar Facility. Cell A is an engineered, closed, hazardous waste landfill. Cell A does not generate or receive any wastes. The waste and process codes included in Part A Application represent the wastes that were formerly disposed in Cell A and/or wastes generated at the Lion Copolymer Geismar, LLC Facility as a whole and do not indicate any current operations within the Former Waste Lagoon System. Cell B was formerly included in the post-closure permit but has since received a No Further Action-At This Time assessment from the LDEQ.



| DOT ID No. | Owner Name | Depth (feet) |
|------------|-----------------|--------------|
| -26 | MONOCHEM INC | 275 |
| -263 | BASF CORP | 462 |
| -27 | MONOCHEM INC | 337 |
| -316 | GEISMAR VINYL | 478 |
| -321 | RUBICON CHEM | 523 |
| -337 | BASF CORP | 459 |
| -338 | BASF CORP | 466 |
| -339 | BASF CORP | 470 |
| -370 | MONOCHEM | 500 |
| -371 | MONOCHEM | 350 |
| -388 | BASF CORP | 352 |
| -438 | BASF CORP | 373 |
| -500 | UNIROYAL CHEM | 480 |
| -556 | OSCA-GREAT LAKE | 510 |
| -557 | OSCA-GREAT LAKE | 510 |
| -569 | HEXION | 305 |
| -570 | HEXION | 306 |
| -580 | BASF CORP | 344 |

figure 1
TOPOGRAPHIC MAP
RCRA POST-CLOSURE PERMIT RENEWAL
CELL A OF THE FORMER WASTE LAGOON SYSTEM, LION COPOLYMER GEISMAR, LLC FACILITY
Lion Copolymer Geismar, LLC, Geismar, Louisiana

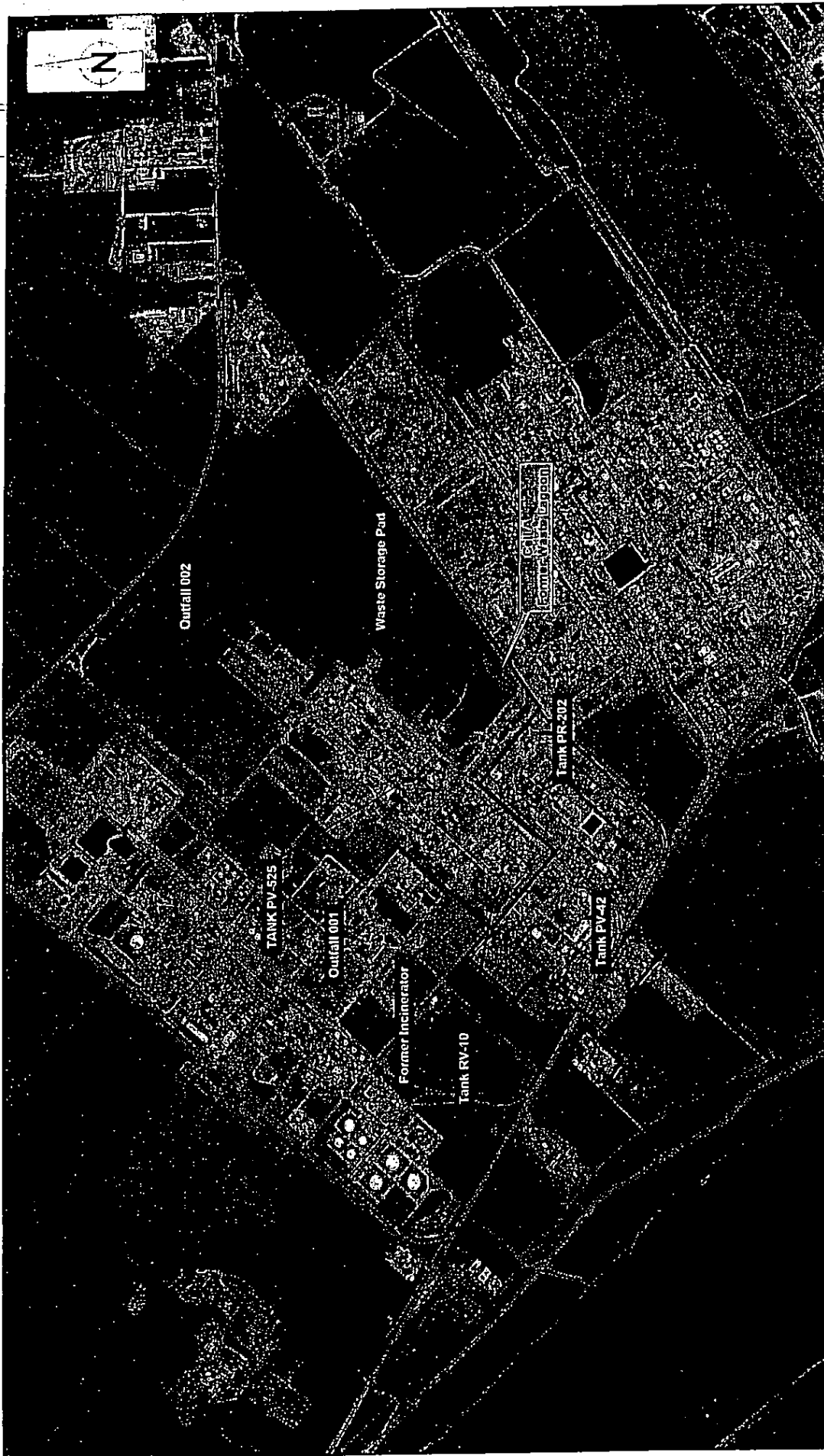


NOTE: WASTE FACILITIES NOTED OTHER THAN CELL A ARE EITHER OPERATIONAL, LESS THAN 90-DAY STORAGE FACILITIES OR FACILITIES PENDING CLOSURE AND ARE NOT ASSOCIATED WITH THIS PERMIT APPLICATION.



27316-09(01)3/PR-BR001

BEST COPY



RE: U.S.G.S. 2005 AERIAL PHOTOGRAPH.

NOTE: WASTE FACILITIES NOTED OTHER THAN CELL A ARE
EITHER OPERATIONAL, LESS THAN 90-DAY STORAGE
FACILITIES OR FACILITIES PENDING CLOSURE AND ARE NOT
ASSOCIATED WITH THIS PERMIT APPLICATION.



27316-09(10/13)PR-BR002

figure 2

AERIAL PHOTOGRAPHIC MAP
RCRA POST-CLOSURE PERMIT RENEWAL
CELL A OF THE FORMER WASTE LAGOON SYSTEM, LION COPOLYMER GEISMAR, LLC FACILITY
Lion Copolymer Geismar, LLC, Geismar, Louisiana

UNITED STATES OF AMERICA

State of Louisiana



Jay Bardenne
SECRETARY OF STATE

As Secretary of State, of the State of Louisiana, I do hereby Certify that
LION COPOLYMER GEISMAR, LLC

A limited liability company domiciled in WILMINGTON,
DELAWARE,

Filed charter and qualified to do business in this State on
April 23, 2007,

I further certify that the records of this Office indicate
the company has paid all fees due the Secretary of State,
and so far as the Office of the Secretary of State is
concerned, is in good standing and is authorized to do
business in this State.

I further certify that this certificate is not intended to
reflect the financial condition of this company since this
information is not available from the records of this
Office.

*In testimony whereof, I have hereunto set
my hand and caused the Seal of my Office
to be affixed at the City of Baton Rouge on,*
November 9, 2007



VSC 36434078Q

Secretary of State

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1984 HAZARDOUS AND SOLID WASTE AMENDMENTS TO RCRA

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LIST OF ATTACHMENTS

ATTACHMENT 1

LIST OF FACILITY DOCUMENTS
INCORPORATED IN THE PERMIT BY
REFERENCE

**BODY
OF
PERMIT**

**FINAL
HAZARDOUS WASTE POST-CLOSURE RENEWAL PERMIT**

**LION COPOLYMER GEISMAR, LLC
EPA ID# LAD 008194060
Agency Interest #1433**

**Ascension Parish
Geismar, Louisiana
PER20000002
Permit Number LAD 008194060-PC-RN-1**

I. PERMIT PREAMBLE

This permit is issued to Lion Copolymer Geismar, LLC, hereinafter referred to as the Permittee, by the Louisiana Department of Environmental Quality (LDEQ) under authority of the Louisiana Hazardous Waste Control Law, R.S. 30:2171 et seq., and the regulations adopted thereunder.

This permit is based on information submitted in the permit application, and all subsequent amendments, and on the applicant's certification that such information is accurate and that all facilities were or will be maintained and operated as specified in the application.

This permit is conditioned upon full compliance with all applicable provisions of the Louisiana Hazardous Waste Control Law, R.S. 30:2171 et. seq., and the regulations adopted thereunder.

GLOSSARY OF TERMS

For the purpose of this permit, terms used herein shall have the same meaning as those in LAC 33:V.Subpart 1 unless the context of use in this permit clearly indicates otherwise. Where terms are not otherwise defined, the meaning otherwise associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

"Administrative Authority" means the Secretary of the Louisiana Department of Environmental Quality or his/her designee (including appropriate assistant secretary).

"Application" refers to the RCRA Part B Permit Application and subsequent amendments submitted by the Permittee for obtaining a permit.

"Area of Concern" (AOC) means any discernable unit or area which, in the opinion of the Administrative Authority, may have received solid or hazardous waste or waste containing hazardous constituents at any time. The Administrative Authority may require investigation of the unit to determine if it is a Solid Waste Management Unit (SWMU). If shown to be a SWMU by the investigation, the AOC must be reported by the Permittee as a newly-identified SWMU.

"Area of Investigation" (AOI) is a zone contiguous to and including impacted media defined vertically and horizontally by the presence of one or more constituents in concentrations exceeding the limiting SS, MO-1 RS, or MO-2 RS (depending on the option being implemented).

"Beneficial Resource" describes natural resources that are useful to human and ecological receptors. The state may establish statutes or regulations that identify certain environmental components, such as specific groundwater or surface water sources, as a "Special Beneficial Resource," or "Designated Beneficial Resource." The beneficial resources then may be entitled to greater protection from contamination.

"Constituents of Concern" (COC) means the COPC's that pose a significant risk.

"Constituents of Potential Concern" (COPC) means chemicals from hazardous waste and hazardous waste constituents that are potentially site related and have data of quality for use in the Screen or a site-specific risk assessment. The facility should compile a list of COPC's for each release site based on existing sampling data, waste analysis reports, etc.

"Conceptual Site Model" (CSM) is part of the Data Quality Objective (DQO) process that presents a three-dimensional picture of site conditions at a discrete point in time that conveys what is known about the facility, releases, release mechanisms, contaminant fate and transport, exposure pathways, potential receptors, and risks. The information for the CSM is documented into six profiles. The CSM evolves as data gaps in the profiles become more complete, and will be refined based upon results of site characterization data. The final CSM is documented in the Risk Management Plan (RMP).

"CWA" means Clean Water Act.

"Corrective Action" is an activity conducted to protect human health and the environment.

"Dense Nonaqueous Phase Liquid (DNAPL)" a dense liquid not dissolved in water, commonly referred to as "free product."

"Department" means the Louisiana Department of Environmental Quality (LDEQ).

"EPA" means the United States Environmental Protection Agency.

"Facility" means, for the purpose of conducting corrective action under LAC 33:V.3322, all the contiguous property under the control of the Permittee.

"HSWA" means the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Hazardous Constituent" means any constituent identified in LAC 33:V.Chapter 31.Table 1, or any constituent identified in LAC 33:V.3325.Table 4.

"LDEQ" means the Louisiana Department of Environmental Quality.

"Light Nonaqueous Phase Liquid (LNAPL)" a light liquid not dissolved in water, commonly referred to as "free product."

"Newly-discovered Release" any release(s) of hazardous waste, including hazardous constituents, in which there is a statistically significant increase over the background data for the media of concern, during the course of groundwater monitoring, field investigation, environmental auditing, or by other means.

"Operating Record" means written or electronic records of all maintenance, monitoring, inspection, calibration, or performance testing—or other data as may be required—to demonstrate compliance with this permit, document noncompliance with this permit, or document actions taken to remedy noncompliance with this permit. A minimum list of documents that must be included in the operating record are identified at LAC 33:V.1529.B.

"Permittee" means Lion Copolymer Geismar, LLC, 36191 Louisiana Highway 30, Geismar, Louisiana 70734.

"RCRA Permit" means the full permit, with RCRA and HSWA portions.

"RFA" means RCRA Facility Assessment.

"RFI" means RCRA Facility Investigation.

"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping or disposing of hazardous wastes (including hazardous

constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"SARA" means Superfund Amendments and Reauthorization Action of 1986.

"Solid Waste Management Unit" (SWMU) means any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

"Stabilization" is an action taken for the purpose of controlling or abating threats to human health or the environment from releases or preventing or minimizing the further spread of contaminants while long-term remedies are pursued.

If, subsequent to the issuance of this permit, regulations are promulgated which redefine any of the above terms, the Administrative Authority may, at its discretion, apply the new definition to this permit.

All regulating citations are defined as being the regulations in effect on the date of issuance of this permit. New and/or amended regulations are not included as permit requirements until permit modification procedures as specified in Condition II.C of the permit and LAC 33:V.321 are completed.

II. GENERAL PERMIT CONDITIONS

II.A. DURATION OF PERMIT

This permit is effective as of the date indicated on the accompanying signature page and shall remain in effect for a maximum period of ten (10) years from the effective date, unless suspended, modified, revoked and reissued or terminated for just cause.

II.B. EFFECT OF PERMIT

This permit authorizes the Permittee to conduct post-closure care activities associated with the Former Waste Lagoon-Cell A in accordance with the conditions of this permit and LAC 33:V.2521.B. The Permittee is prohibited from any storage, treatment or disposal of hazardous waste not authorized by statute, regulation or this permit. Compliance with this permit, LAC 33:V.Subpart 1 and HSWA, constitutes compliance for purposes of enforcement, with Subtitle C of RCRA and Chapter 9 of the Louisiana Environmental Quality Act (Act). However, compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3013 or Section 7003 of RCRA, or under Section 106 (a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) {42 U.S.C. 9606 (a)}.

In accordance with LAC 33:V.307.B and C, issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations.

II.C. PERMIT ACTIONS

Any inaccuracies found in the permit application may be cause for revocation or modification of this permit. The Permittee must inform the Administrative Authority of any deviation from, changes or inaccuracies in the information in the permit application.

The Administrative Authority may also suspend, modify, revoke and reissue, or terminate for cause when necessary to be protective of human health or the environment as specified in 40 CFR 270.41, 270.42, 270.43 or LAC 33:V.309.F, 311.A or 323. The Administrative Authority may modify the permit when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. The filing of a request for permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of Permittee does not stay the applicability or enforceability of any permit condition.

II.D. SEVERABILITY

The conditions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

II.E. DUTIES AND REQUIREMENTS

II.E.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance may be authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit (LAC 33:V.701), constitutes a violation of the LAC 33:V.Subpart 1 and the Environmental Quality Act and is grounds for enforcement action which may include permit termination, permit revocation and reissuance, permit modification, or denial of permit renewal application.

II.E.2. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must reapply for the permit as required by the LAC 33:V.303.N and 309.B. Notification shall be at least 180 calendar days before the permit expires.

II.E.3. Permit Extension

This permit and all conditions herein will remain in effect beyond the permit's expiration date until the Administrative Authority issues a final decision on the re-application, provided the Permittee has submitted a timely, complete new permit application as provided in LAC 33:V.309.B and 315.A.

II.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

II.E.5. Duty to Mitigate

The Permittee shall immediately take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit as required by LAC 33:V.309.D.

II.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related ancillary equipment) that are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or

auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

II.E.7. Duty to Provide Information

The Permittee shall furnish to the Administrative Authority, within a reasonable time, any information which the Administrative Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Administrative Authority upon request, copies of records required by this permit and in accordance with LAC 33:V.309.H.

II.E.8. Inspection and Entry

The Permittee shall allow the Administrative Authority or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

II.E.8.a. enter upon the Permittee's premises where a regulated activity is located or conducted, or where records must be maintained under the conditions of this permit;

II.E.8.b. have access to and copy, at reasonable times, any records that must be maintained under the conditions of this permit;

II.E.8.c. inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operation regulated or required under this permit; and

II.E.8.d. sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Administrative Authority any substances or parameters at any location.

II.E.9. Sample Monitoring and Records

II.E.9.a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, "SW-846", latest revision, or an equivalent method.

II.E.9.b. Records of monitoring information shall include:

II.E.9.b.(1) the date, exact place, and time of sampling or measurements;

II.E.9.b.(2) the name(s) and signature(s) of the individual(s) who performed the sampling or measurements;

II.E.9.b.(3) the date(s) analyses were performed;

II.E.9.b.(4) the name(s) and signature(s) of the individual(s) who performed the analyses;

II.E.9.b.(5) the analytical techniques or methods used;

II.E.9.b.(6) the results of such analyses; and

II.E.9.b.(7) associated quality assurance performance data.

II.E.9.c. Laboratory Quality Assurance/Quality Control

In order to ensure the accuracy, precision, and reliability of data generated for use, the Permittee shall submit a statement, certified as specified in LAC 33:V.513 and included in the annual report, indicating that:

II.E.9.c.(1) any commercial laboratory providing analytical results and test data to the LDEQ required by this permit is accredited by the Louisiana Environmental Laboratory Accreditation Program (LELAP) in accordance with LAC 33:I. Subpart 3, Chapter 45. Laboratory data generated by commercial laboratories not accredited under LELAP will not be accepted by the LDEQ.

LAC 33:I. Subpart 3 (Chapters 45-49) provides requirements for the accreditation program. Regulations and a list of labs that have applied for accreditation are available on the LDEQ website: <http://www.deq.louisiana.gov/portal/tabid/2412/Default.aspx>.

In accordance with LAC 33:I.4501, the requirements for LELAP accreditation applies whenever data is:

- submitted on behalf of a facility;
- required as part of a permit application;
- required by order of the LDEQ;
- required to be included in a monitoring report submitted to the LDEQ;
- required to be submitted by contract; or
- otherwise required by the LDEQ regulations.

This includes, but is not limited to data from RCRA Trial Burns, Risks Burns, Risk Assessments, MACT Comprehensive Performance Tests, and data used for continuing compliance demonstrations.

II.E.9.c.(2) If the Permittee decides to use their own in-house laboratory for test and analysis, the laboratory is not required to be accredited by LELAP. However, the laboratory must document and submit for approval, quality assurance/quality control procedures.

II.E.9.c.(3) For approval of equivalent testing or analytical methods, the Permittee may petition for a regulatory amendment under LAC 33:V.105.I and LAC 33:I.Chapter 9. In cases where an approved methodology for a parameter/analyte is not available or listed, a request to utilize an alternate method shall be submitted to the Administrative Authority for approval. Documentation must be submitted to the LDEQ that will verify that the results obtained from the alternate method are equal to or better than those obtained from EPA-accepted methods, as well as those deemed equivalent by the LDEQ.

II.E.10. Retention of Records

The Permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations for the active life of the facility and for the post-closure care period.

The Permittee shall maintain records through the active life of the facility (including operation, closure and post-closure periods) as required by LAC 33:V.309.J and LAC 33:V.1529.A, B, and C. All records, including plans, must be furnished upon request and made available at all reasonable times as required by LAC 33:V.1529.C.

File copies shall be kept for LDEQ inspection for a period of not less than three years as required by LAC 33:V.317.B.

The Permittee shall, for the life of the permit, maintain records of all data used to complete the application for this permit and any supplemental information submitted under the Louisiana Hazardous Waste Control Law (LA. R.S. 30:2171 et seq.).

II.E.11. Notices of Planned Physical Facility Changes

The Permittee shall give notice to the Administrative Authority, as soon as possible, of any planned physical alterations or additions to the permitted facility, in accordance with LAC 33:V.309.L.1.

II.E.12. Physical Facility after Modification

For a closed unit being modified, the Permittee may not manage hazardous waste in the modified portion of the closed unit until:

II.E.12.a. the Permittee has submitted to and received approval from the Administrative Authority, by certified mail or hand delivery, a letter signed by the Permittee and an independent registered professional engineer stating that the unit is complete and has been constructed or modified in compliance with the permit; and

II.E.12.b. the Administrative Authority has inspected the modified unit following a request to make final inspection by the Permittee and finds it is in compliance with the conditions of the permit and all applicable sections of LAC 33:V.Subpart 1, and has issued an Order to Proceed. The Permittee may then commence treatment, storage, or disposal of hazardous waste.

II.E.13. Anticipated Noncompliance

The Permittee shall give advance notice to the Administrative Authority of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

II.E.14. Transfer of Permits

This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to LAC 33:V.309.L.4, 321.B, 321.C.4, and 1531.

II.E.15. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date (LAC 33:V.309.L.6).

II.E.16. Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3915, in the event of an unauthorized discharge that results in an emergency condition (an emergency condition is any condition which could be reasonably expected to endanger the health and safety of the public, cause significant adverse impact to the land, water, or air environment, or cause severe damage to property), the Permittee shall notify the DPS (Department of Public Safety) 24-hour Louisiana Emergency Hazardous Materials Hotline by telephone at (225) 925-6595 immediately, but in no case later than one (1) hour after learning of the discharge. The DPS 24-hour Louisiana Emergency Hazardous Materials Hotline will subsequently notify the Department regarding the details of the discharge.

II.E.17. Non-Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3917, in the event of an unauthorized discharge that exceeds a reportable quantity specified in LAC 33:I.Chapter 39.Subchapter E and/or results in contamination of the groundwaters of the state but does not result in an emergency condition, the Permittee shall promptly notify the Department within twenty-four (24) hours after learning of the discharge. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC) in accordance with the procedure and content requirements specified in LAC 33:I.3923.

II.E.18. Unauthorized Discharge to Groundwater Notification

In accordance with LAC 33:I.3919, in the event of an unauthorized discharge resulting in contamination of groundwaters of the state by moving in, into, within or on any saturated subsurface strata, the Permittee shall promptly notify the Department within twenty-four (24) hours after learning of the discharge. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, SPOC in accordance with the procedure and content requirements specified in LAC 33:I.3923.

II.E.19. Written Notification Reports for Unauthorized Discharges

The Permittee shall submit written reports to the SPOC for any unauthorized discharges requiring notification under Conditions II.E.16, II.E.17 or II.E.18 of this permit. The written report shall be submitted in accordance with the procedure and content requirements specified in LAC 33:I.3925.

II.E.20. Noncompliance Reporting

The Permittee shall report orally within twenty-four (24) hours any noncompliance with the permit not reported under Condition II.E.16 or Condition II.E.17 of this permit that may endanger the human health or the environment. This report shall include at minimum the following information:

II.E.20.a. information concerning the release of any hazardous waste that may endanger public drinking water supplies; and

II.E.20.b. information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, that could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:

II.E.20.b.(1) name, address, and telephone number of the owner or operator;

II.E.20.b.(2) name, address, and telephone number of the facility;

II.E.20.b.(3) date, time, and type of incident;

II.E.20.b.(4) name and quantity of materials involved;

II.E.20.b.(5) the extent of injuries, if any;

II.E.20.b.(6) an assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and

II.E.20.b.(7) estimated quantity and disposition of recovered material that resulted from the incident.

II.E.21. Follow-up Written Report of Noncompliance

The Permittee shall provide a written submission within five (5) days after the time the Permittee becomes aware of any noncompliance which may endanger human health or the environment not reported under Condition II.E.19 of this permit. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. If the Administrative Authority waives the requirement, then the Permittee submits a written report within fifteen (15) days after the time the Permittee becomes aware of the circumstances, as required by LAC 33:V.309.L.7.

II.E.22. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time required monitoring reports are submitted. The reports shall contain the information listed in Condition II.E.20 of this permit.

II.E.23. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or that it submitted incorrect information in a permit application, or in any report to the Administrative Authority, the Permittee shall promptly submit such facts or information.

II.E.24. Signatory Requirement

All applications, reports or other information submitted to the Administrative Authority shall be signed and certified according to LAC 33:V.507, 509, 511, and 513.

II.E.25. Schedule of Compliance

- II.E.25.a.** Permittee must submit, within sixty (60) days after the effective date of the permit, an updated Groundwater Sampling and Analysis Plan, for approval that is consistent with Condition VI. Tables 2, 3, and 4 of this permit. Upon approval by the Administrative Authority, the Permittee will be required to do a permit modification.
- II.E.25.b.** Permittee must submit, within sixty (60) days after the effective date of the permit, a Notice of Intent to conduct corrective action using the CAS in accordance with Condition VIII.B.1.
- II.E.25.c.** Permittee must submit, within sixty (60) days after the effective date of the permit, an updated Post-Closure Plan, for approval that is consistent with the updated Sampling and Analysis Plan being submitted per Condition II.E.25.a of this permit.
- II.E.25.d.** Permittee must submit, within ninety (90) days after the effective date of the permit, updated unit specific RECAP MO-1 values for the constituents that have had exceedances of the MCL for the Former Waste Lagoon System- Cell A.

II.E.26. Additional Operating Standards

(RESERVED)

II.E.27. Updated Documents to Be Submitted Prior to Operation

(RESERVED)

II.E.28. Documents to Be Maintained at Facility Site

II.E.28.a. Until post-closure is completed and certified by an independent registered professional engineer, the Permittee shall maintain at the facility the following documents and any amendments, revisions, and modifications to these documents. Any revision or changes shall be submitted with the annual report unless previously submitted.

II.E.28.a.(1) (RESERVED). A waste analysis plan is not required for the unit in post-closure under this permit.

II.E.28.a.(2) A personnel training plan submitted in accordance with LAC 33:V.1515 (see Attachment 1).

II.E.28.a.(3) Contingency Plan submitted in accordance with LAC 33:V.1513 (see Attachment 1).

II.E.28.a.(4) Arrangements with local authorities in accordance with LAC 33:V.1511.G (see Attachment 1).

II.E.28.a.(5) Post-Closure Plan submitted in accordance with LAC 33:V.3523 and approved by the Administrative Authority, as well as any post-closure care requirements that may be required initially or through permit modifications in accordance with LAC 33:V.3523 (see Attachment 1).

II.E.28.a.(6) Cost estimate for facility post-closure care submitted in accordance with LAC 33:V.3709 and approved by the Administrative Authority, as well as any post-closure cost estimate that may be required initially or through permit modifications in accordance with LAC 33:V.3709 (see Attachment 1).

II.E.28.a.(7) Operating Records as required by LAC 33:V.1529 and 2115.D.

II.E.28.a.(8) Inspection plan developed in accordance with LAC 33:V.517.G and 1509.B and approved by the Administrative Authority (see Attachment 1).

II.E.28.a.(9) Security procedures developed in accordance with LAC 33:V.1507 (see Attachment 1).

II.E.28.a.(10) Sampling and Analysis Plan developed in accordance with LAC 33:V. Chapter 33 (see Attachment 1).

II.E.28.b. All proposed amendments, revisions and modifications to any plan or cost estimates required by this permit shall be submitted to the Administrative Authority for approval.

II.E.29. Annual Report

An annual report shall be submitted covering all hazardous waste units and their activities during the previous calendar year as required by LAC 33:V.1529.D.

II.E.30. Manifest

The Permittee shall report manifest discrepancies and unmanifested waste as required by LAC 33:V.309.L.8 and 9.

II.E.31. Emissions

Emissions from any hazardous waste facility shall not violate the Louisiana Air Quality Regulations. If air quality standards are exceeded, the site will follow air regulation protocol.

II.E.32. Water Discharges

Water discharges from any hazardous waste facility shall not violate the Louisiana Water Quality Regulations. If water standards are exceeded, the site will follow water quality regulation protocol.

II.E.33. Non-Listed Hazardous Waste Facilities

This permit is issued for those hazardous waste facilities listed in Condition IV (Permitted Closed Facilities). If the Permittee determines that an unpermitted hazardous waste facility exists, the Permittee must immediately notify the Administrative Authority in accordance with Condition II.E.23 of the General Permit Conditions.

II.E.34. Compliance with Land Disposal Restrictions

The Permittee shall comply with those land disposal restrictions set forth in LA. R.S. 30:2193, all regulations promulgated thereunder, and the HSWA portion of this permit (Conditions VII and VIII).

II.E.35. Establishing Permit Conditions

Permits for facilities with pre-existing groundwater contamination are subject to all limits, conditions, remediation and corrective action programs designated under LAC 33:V.311.D and LAC 33:V.3303.

II.E.36. Obligation for Corrective Action

Owners or operators of hazardous waste management units must have all necessary permits during the active life of the unit and for any period necessary to comply with the corrective action requirements in Condition VIII of this permit. The facility is obligated to complete facility-wide corrective action regardless of the operational status of the facility.

II.E.37. Attachments and Documents Incorporated by Reference

All attachments and documents required by this permit, including all plans and schedules, are incorporated, upon approval by the Administrative Authority, into this permit by reference and become an enforceable part of this permit. When applicable, the Permittee must modify the permit according to LAC 33:V.Chapter 3. Since required items are essential elements of this permit, failure to submit any of the required items or

submission of inadequate or insufficient information may subject the Permittee to enforcement action, which may include fines, suspension, or revocation of the permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this permit. Written requests for extension of due dates for submittals may be granted by the Administrative Authority.

If the Administrative Authority determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Administrative Authority may modify this permit according to procedures in LAC 33:V.321.

III. GENERAL POST-CLOSURE CONDITIONS

III.A. DESIGN AND OPERATION OF THE POST-CLOSURE UNIT

III.A.1. The Permittee must maintain all facilities included in Condition IV, Table 1 to minimize the possibility of a fire, explosion, or any unauthorized sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

III.A.2. The Permittee must not manage any new wastes.

III.B. REQUIRED NOTICE

(RESERVED)

III.C. GENERAL WASTE ANALYSIS

Reserved as per Condition II.E.28.a.(1).

III.D. SECURITY

The Permittee must comply with the security provisions of LAC 33:V.1507, as referenced in Attachment 1.

III.E. GENERAL INSPECTION REQUIREMENTS

The Permittee must follow the Inspection Plan referenced in Condition II.E.28.a.(8) and Attachment 1. The Permittee must remedy any deterioration or malfunction discovered by an inspection as required by LAC 33:V.1509.C. Records of inspections must be kept as required by LAC 33:V.1509.D. The inspection schedule must include the regulatory requirements of LAC 33:V.517.G, 1509.A and B, and 3523.B.

III.F. PERSONNEL TRAINING

The Permittee must comply with the personnel training of LAC 33:V.1515, as referenced in Attachment 1.

III.G. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee must take precautions as required by LAC 33:V.1517 to prevent accidental ignition or reaction of ignitable or reactive wastes.

III.H. LOCATION STANDARDS

III.H.1. The Permittee has furnished evidence that it is in compliance with seismic standards as required by LAC 33:V.517.T.

III.H.2. The Permittee must not manage any hazardous waste on any portion of the property that lies within the 100 year flood plain (as identified in the Flood Insurance Rating Map) unless such areas are raised above this flood level or other means (e.g., levees) are provided to protect such areas from washouts, overtopping by wave action, soil erosion or other effects of such a flood as required by LAC 33:V.1503.B.3. Such site improvements must be certified by independent licensed professional engineers and approved by LDEQ prior to any hazardous waste and/or hazardous waste units being placed thereon.

III.I. PRECIPITATION RUN-ON AND RUN-OFF

The Permittee must provide for the control by diversion or treatment of run-on and run-off resulting from a rainfall of at least twelve (12) inches, occurring during a period of twenty-four (24) hours in conformity with locally available records of a twenty-four (24) hour rainfall as per LAC 33:V.1503.B.2. The Permittee shall comply with the requirements of LAC 33:V.2911.

III.J. HURRICANE EVENTS

The Permittee must initiate those applicable portions of the Contingency Plan during a hurricane as well as appropriate actions required by LAC 33:V.1507, 1509 and 1511.

III.K. PREPAREDNESS AND PREVENTION

III.K.1. Required Equipment

At a minimum, the Permittee must install and maintain the equipment set forth in the Contingency Plan, as required by LAC 33:V.1511.C.

III.K.2. Testing and Maintenance of Equipment

The Permittee must test and maintain the equipment specified in Section III.K.1 to insure its proper operation in time of emergency. The testing and maintenance of the equipment must be documented in the operating record.

III.K.3. Access to Communications or Alarm Systems

The Permittee must maintain access to the communications or alarm system as required by LAC 33:V.1511.E.1 and 1511.E.2.

III.K.4. Arrangements with Local Authorities

The Permittee shall document in the annual report that the requirements of LAC 33:V.1511.G have been met. This documentation shall include those state and local agencies involved and those facilities and operations covered. Documentation of written arrangements with state and local agencies shall also be included in this report. Where state or local authorities decline to enter into such arrangements, the Permittee must document the refusal in the operating record.

III.L. CONTINGENCY PLAN

III.L.1. Implementation of Plan

The Permittee must immediately carry out the provisions of the Contingency Plan (as referenced in Attachment 1), and follow the emergency procedures described by LAC 33:V.1513.F whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that threaten or could threaten human health or the environment.

III.L.2. Copies of Plan

The Permittee must comply with the requirements of LAC 33:V.1513.C.

III.L.3. Amendments to Plan

The Permittee must review and immediately amend, if necessary, the Contingency Plan as required by LAC 33:V.1513.D.

III.L.4. Emergency Coordinator

The Permittee must comply with the requirements of LAC 33:V.1513.E and 322.B.6 concerning the emergency coordinator.

III.M. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of LAC 33:V.Chapter 11.

III.N. RECORD KEEPING AND REPORTING

III.N.1. Operating Record

Reserved as per Condition II.E.28.a.(7).

III.N.2. Annual Report

The Permittee must comply with the annual report requirements of LAC 33:V.1529.D.

III.N.3. Operations Manual

Reserved as per Condition II.E.28.a.(7).

III.O. POST-CLOSURE

III.O.1. Post-Closure Care

The Permittee must manage the Former Waste Lagoon System – Cell A in accordance with this permit, LAC 33:V. Chapter 35, Subchapter B and LAC 33:V.2521.

III.O.2. Amendment to Post-Closure Permit

The Permittee must request modification to this post-closure permit when necessary, in accordance with LAC 33:V.3523.D. and LAC 33:V.321.

III.O.3. Post-Closure Maintenance

After final closure, the Permittee must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527, including maintenance and monitoring throughout the post-closure care period specified in LAC 33:V.3521.A.1. The Permittee must maintain all units in post-closure according to the requirements in Condition V.B.

III.O.4. Post-Closure Restrictions

The Administrative Authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.1507, during part or all of the post-closure care period when access by the public or domestic livestock may pose a hazard to human health.

III.O.5. Post-Closure Property or Site Use

III.O.5.a. Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the permitted closed unit's monitoring systems, unless the Administrative Authority finds that the disturbance:

III.O.5.a.(1) is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

III.O.5.a.(2) is necessary to reduce a threat to human health or the environment.

III.O.5.b. Any post-closure activity other than that specified in this permit must have prior approval of the Administrative Authority.

III.O.6. Post-Closure Contact

The Permittee must provide the name, address, and phone number of the person or office to contact about the permitted post-closure units during the post-closure care period.

III.O.7. Certification of Completion of Post-Closure Care

No later than sixty (60) days after completion of the established post-closure care period for the specified unit, the Permittee must submit to the Administrative Authority, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit(s) was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the Permittee and an independent registered professional engineer. Within sixty (60) days after receipt of the certification the Administrative Authority will notify the owner or operator that he is no longer required to maintain financial assurance for post-closure care of that unit, unless the Administrative Authority has reason to believe that post-closure care was not conducted in accordance with the approved post-closure plan.

The certification of post-closure care shall include the certification statement found in the LAC 33:V.513.A or the current certification statement in the Louisiana hazardous waste regulations at the time of completion of post-closure care.

III.P. COST ESTIMATE FOR CARE OF THE POST-CLOSURE UNIT

III.P.1. The Permittee must maintain a cost estimate for the permitted and associated structures as required by LAC 33:V.3709.

III.P.2. The Permittee must maintain and adjust the post-closure cost estimate for inflation, as specified in LAC 33:V.3709.B, C, D, and for other circumstances that increase the cost of post-closure.

III.P.3. The Permittee must base all post-closure cost estimates on the assumption that a third party contractor performs post-closure monitoring and maintenance in accordance with LAC 33:V.3709.A.

III.P.4. The Permittee must consider the inventory and process conditions and their impact on the post-closure cost estimate for any re-submittal.

III.P.5. During the life of the facility, the Permittee must keep, at the facility, its latest post-closure cost estimates, as necessary, to comply with LAC 33:V.3709.D.

III.Q. FINANCIAL ASSURANCE FOR THE POST-CLOSURE UNIT

Throughout the post-closure care period, the Permittee must provide updates for its financial assurance mechanisms, as necessary, to comply with the provisions of LAC 33:V.3711.

III.R. LIABILITY REQUIREMENTS

(RESERVED)

III.S. INCAPACITY OF THE PERMITTEE

The Permittee must comply with LAC 33:V.3717 whenever bankruptcy is initiated for the Permittee or its institutions providing financial assurance. If insurance is used for compliance with LAC 33:V.3715, the Permittee must immediately notify the Administrative Authority if the insurance company is placed in receivership. The Permittee must establish other financial assurance or liability coverage within sixty (60) days after such an event.

III.T. POST-CLOSURE NOTICES

If the Permittee or any subsequent Permittee of the land upon which this hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner or contaminated soils, he must request a modification to the post-closure permit in accordance with the applicable requirements in LAC 33:V, Chapters 3 and 7. The Permittee must demonstrate that the removal of hazardous wastes will satisfy the criteria of LAC 33:V.3521. By removing hazardous waste, the Permittee may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of LAC 33:V, Subpart 1. If he is granted a permit modification or otherwise granted approval to conduct such removal activities, the Permittee may request that the Administrative Authority approve either:

III.T.1. the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

III.T.2. the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

IV. PERMITTED CLOSED UNITS

This permit is applicable only to the unit known as the Former Waste Lagoon System-Cell A located on the property of Lion Copolymer Geismar LLC, Ascension Parish, Louisiana. This permit also applies to any appurtenances associated with the unit. The appurtenances are defined as any run-on/run-off control systems, leachate collection/leak detection systems, tanks, and/or piping and instrumentation associated with the regulated unit. If any additional appurtenances are added in the future, they would be addressed through a permit modification as required by regulation and this permit.

TABLE 1
INVENTORY AT CLOSURE

| UNIT NAME | UNIT TYPE | CAPACITY |
|-----------------------------------|-----------|-----------|
| Former Waste Lagoon System-Cell A | Landfill | 2.5 Acres |

V. PERMIT CONDITIONS APPLICABLE TO PERMITTED CLOSED UNIT

V.A. POST-CLOSURE CARE PERIOD

The post-closure care period will be in effect for the period of thirty (30) years, unless extended or shortened by the Administrative Authority, as specified in LAC 33:V.3521.A.1 and 2, Length of Post-Closure.

V.A.1. Former Waste Lagoon System- Cell A: Post-closure monitoring commenced in September, 1990.

V.B. POST-CLOSURE MAINTENANCE

After final closure, the owner or operator must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527 and Condition III.O of this permit, including maintenance and monitoring throughout the post-closure care period specified in the permit under Condition V.A and LAC 33:V.3521.A.1. The owner or operator must:

V.B.1. for all permitted units, maintain the integrity and effectiveness of the final cover, including making repairs as necessary to correct the effects of settling, subsidence, erosion, or other events;

V.B.2. for all permitted units, maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33;

V.B.3. for all permitted units, manage a run-on and run-off control system to prevent erosion at and other damage to the final cover;

V.B.4. for all permitted units, maintain the cover with a final cover designed, constructed and maintained to:

V.B.4.a. provide long-term minimization of migration of liquids through the landfill;

V.B.4.b. function with minimal maintenance at all permitted units;

V.B.4.c. promote drainage and minimize erosion or abrasion of the final cover at all permitted units;

V.B.4.d. accommodate settling and subsidence, as necessary, so that the cover's integrity is maintained for all permitted units; and

V.B.4.e. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present at the landfill.

V.B.5. The annual report shall include a Post-Closure Activity Report for the Former Waste Lagoon System-Cell A.

V.C. POST-CLOSURE RESTRICTIONS

The Administrative Authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.1507, during part or all of the post-closure period when access by the public or domestic livestock may pose a hazard to human health.

V.D. POST-CLOSURE USE OF PROPERTY

V.D.1. Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the final cover, liner(s), or any other components of the containment system, or the function of the permitted closed unit's monitoring systems, unless the Administrative Authority find that the disturbance:

V.D.1.a. is necessary to the proposed use of the property and will not increase the potential hazard to human health or the environment; or

V.D.1.b. is necessary to reduce a threat to human health of the environment.

V.D.2. Any post-closure activity other than that specified in this permit must have prior approval of the Administrative Authority.

VI. GROUNDWATER PROTECTION

VI.A. APPLICABILITY

The regulations of LAC 33:V, Chapters 3, 5, 15, 25, 33, 35, and 37, and Louisiana Hazardous Waste Control Law Revised Statute R.S., 30:2171 of the Environmental Quality Act, R.S., 30:2001 et seq., and the provisions of Condition VI shall apply to groundwater protection programs at the units identified in Condition IV, Table 1 of this permit. Accordingly, the units referenced in Condition IV, Table 1 of the permit are subject to post-closure groundwater monitoring.

All requirements of Condition VI must be satisfied and shall apply until the Administrative Authority has accepted the certification of completion of post closure care required by regulation and under Condition III.O.7 of this permit. This includes the compliance, closure, and post-closure care periods.

If groundwater contamination is confirmed as a result of operations related to past or present hazardous waste management facilities associated with this site, the Permittee shall establish, expand or continue, assessment and corrective action in accordance with the requirements of LAC 33:V.Chapter 33 and as subsequently directed by the Administrative Authority.

VI.B. REQUIRED PROGRAMS

The Permittee must continue to conduct a Compliance Monitoring Program per Condition VI.I using all existing systems necessary to comply with the monitoring specified herein and as stated in the most current approved Sampling and Analysis Plan. The Permittee must notify the Administrative Authority in accordance with the schedule specified in Conditions VI.I and VI.L, when any of the hazardous constituents or indicator parameters are detected in concentrations equal to or exceeding the designated limits at the point of compliance or upon first detection in any other monitoring well at the facility.

The Permittee must institute corrective action in all areas where groundwater has been affected by hazardous constituents or indicator parameters exceeding the assigned concentration limits. In the event evidence that the RECAP MO-1 concentration limits defined in Condition VI, Table 3 of this permit have been exceeded in any groundwater monitoring wells in Condition VI, Table 2 of this permit, the Permittee shall modify the permit in accordance with LAC 33:V.321 and Condition VI.J of this permit in order to establish a Corrective Action Program. Corrective action must continue uninterrupted to the fullest extent until groundwater problems are abated per the requirements of LAC 33:V.3321 and this requirement is terminated through permit modification in accordance with LAC 33:V.321 and 322, as applicable.

VI.C. GROUNDWATER PROTECTION STANDARD

The groundwater protection standard shall be required during the Compliance Monitoring Program and/or Correction Action Program and is the concentration limit that shall indicate when corrective action must begin and when it may be terminated. The Administrative

Authority shall establish the groundwater protection standard when hazardous constituents from a regulated unit have been detected (as defined by LAC 33.V.3303.A.1) in the groundwater. The RECAP MO-1 concentration limits for each hazardous waste constituent specified in Condition VI, Table 3 shall serve as the groundwater protection standard.

Accordingly, the Permittee must comply with the conditions specified in this permit that are designed to ensure that hazardous constituents (Condition VI.D) detected (as defined by LAC 33.V.3303.A.1) do not exceed the concentration limits (Condition VI.D) in the uppermost permeable zones underlying the regulated units, beyond or below the point of compliance (Condition VI.E) during the compliance period (Condition VI.F).

The groundwater protection standard does not exempt the Permittee from required corrective action regarding contamination detected at wells not designated as point of compliance.

VI.D. HAZARDOUS CONSTITUENTS, PARAMETERS, ANALYTICAL FREQUENCY AND CONCENTRATION LIMITS

The wells, hazardous constituents and concentration limits to which the groundwater protection standard of LAC 33:V.3305 apply are shown herein in Condition VI, Tables 2 and 3. The sampling frequency for the hazardous constituents is noted in Condition VI, Table 2.

Condition VI, Table 2. RCRA Units, Point of Compliance and Monitoring Wells, Sampling Frequencies, and Analytical Parameters

| Well | Zone | Type | Point of Compliance | Sampling Frequency | Parameters |
|-------|----------|-----------------|---------------------|--|---|
| RN-06 | Zone III | DG ¹ | POC | Semiannual ³ / Annual ⁴ | Condition VI, Table 3 / Table 4 of LAC 33:V.3325 |
| RN-07 | Zone III | DG | POC | Semiannual ³ / Annual ⁴ | |
| N-14 | Zone III | DG | POC | Semiannual ³ / Annual ⁴ | |
| N-16 | Zone III | DG | POC | Semiannual ³ / Annual ⁴ | |
| N-23 | Zone III | UG ² | | Semiannual ³ / Annual ⁴ | |
| RN-08 | Zone III | UG | | Semiannual ³ / Annual ⁴ | Condition VI, Table 3 |
| N-09R | Zone III | UG | | Annual ³ | |
| N-15 | Zone VIA | DG | | Annual ³ | |
| N-19 | Zone III | DG | | Annual ³ | |
| N-22 | Zone III | DG | | Annual ³ | |

¹ DG = Down Gradient

² UG = Up Gradient

³ The sampling frequency is semi-annual or annual (as indicated above) for parameters on Condition VI, Table 3

⁴ The sampling frequency is annual for parameters on Table 4 of LAC 33.V.3325

Condition VI, Table 3. Groundwater Monitoring Methods and Requirements.

| Parameters | Analytical Method ^a | Estimated Practical Quantitation Limit (mg/l) | Maximum Concentration Limit (mg/l) ^b | Groundwater Protection Standard RECAP MO-1 Concentration Limit (µg/L) ^c |
|--|--------------------------------|---|---|--|
| Standard Indicators¹ | | | | |
| pH | SM 4500H+B | Note ^d | Note ^d | |
| Specific Conductance | SM 2510B | Note ^d | Note ^d | |
| TOC | SM 5310B | Note ^d | Note ^d | |
| TOX | SW 846, 9020B | | | |
| Drinking Water Suitability | | | | |
| Mercury | SW 846, 7470A | 0.0002 | Statistics | |
| Barium | SW846, 6010B | 0.10 | Statistics | |
| Groundwater Quality | | | | |
| Chloride | SM 4500 CL E | 1.0 | Statistics | |
| Iron | SW846, 6010B | 0.03 | Statistics | |
| Manganese | SW846, 6010B | 0.01 | Statistics | |
| Sodium | SW846, 6010B | 0.01 | Statistics | |
| Sulfate | EPA 375.4 | 1.0 | Statistics | |
| Priority Pollutant Organics | | | | |
| Benzene | SW 846, 8270B | 0.005 | 0.005 | |
| Benzenethiol | SW 846, 8270C | 0.010 | 0.010 | |
| Benzothiazole | SW 846, 8270C | 0.010 | 0.010 | 28,000 ² |
| 2(3H) Benzothiazolone | SW 846, 8270C | 0.010 | 0.010 | 300,000 ² |
| 1, 1-Dichloroethane | SW 846, 8260B | 0.005 | 0.007 | |
| 1, 2- Dichloroethane | SW 846, 8260B | 0.005 | 0.005 | |
| 1, 1-Dichloroethene | SW 846, 8260B | 0.005 | 0.007 | |
| Methylene Chloride | SW 846, 8260B | 0.005 | 0.005 | |
| N-nitrosodiphenylamine | SW 846, 8270C | 0.010 | 0.010 | 1,410 ² |
| Toluene | SW 846, 8260B | 0.005 | 0.005 | |

^a Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Third Edition (EPA Publication Number SW-846, 1986 as amended): must be in accordance with the latest edition of SW-846.

^b If the maximum allowable concentration limit is exceeded for any constituent, the Permittee must submit for approval a RECAP MO-1 Concentration Limit to serve as the groundwater protection limit for that constituent.

^c For the point of compliance wells only. If the Groundwater Protection Standard (RECAP MO-1 Concentration Limits) is exceeded for the listed constituents, Lion must develop a Corrective Action Monitoring program.

^d These parameters are only being used for qualitative groundwater evaluation with no statistical evaluation. As such, no specific PQL is required other than method consistency.

¹ Four replicates required; pH and specific conductivity to be recorded in the field upon collection.

² Unit specific RECAP MO-1 values will be added once they have been approved by the Administrative Authority. Until the unit specific values have been approved, the site specific RECAP MO-1 will be used.

Condition VI, Table 4. Sample Bottle and Preservation Specifications

| PARAMETERS | CONTAINER TYPE | PRESERVATION METHOD | HOLDING TIME |
|------------------------------------|-----------------------|--|--------------|
| Contamination Indicators | | | |
| pH | 4 Ounce Plastic | Field Measurement | Immediately |
| Specific Conductance | 4 Ounce Plastic | Field Measurement | 28 days |
| TOC | 4 ounce clear bottle | HCL | 28 days |
| TOX | 1-Liter Amber | Na ₂ SO ₃ and H ₂ SO ₄ | 28 days |
| Drinking Water Suitability | | | |
| Mercury | 500 ml Plastic | HNO ₃ (for total only, unpreserved for dissolved) | 28 days |
| Barium | 500 ml Plastic | HNO ₃ (for total only, unpreserved for dissolved) | 6 months |
| Groundwater Quality | | | |
| Chloride | 16 ounce clear bottle | None | 28 days |
| Iron | 500 ml Plastic | HNO ₃ (for total only, unpreserved for dissolved) | 6 months |
| Manganese | 500 ml Plastic | HNO ₃ (for total only, unpreserved for dissolved) | 6 months |
| Sodium | 500 ml Plastic | HNO ₃ (for total only, unpreserved for dissolved) | 6 months |
| Sulfate | 16 ounce clear bottle | None | 28 days |
| Priority Pollutant Organics | | | |

| PARAMETERS | CONTAINER TYPE | PRESERVATION METHOD | HOLDING TIME |
|------------------------|--------------------|---------------------|--------------|
| Benzene | 3, 40-ml VOA vials | HCL | 14 days |
| Benzenethiol | 2, 1-Liter Ambers | None | 7 days |
| Benzothiazole | 2, 1-Liter Ambers | None | 7 days |
| 2(3H) Benzothiazolone | 2, 1-Liter Ambers | None | 7 days |
| 1,1 -Dichloroethane | 3, 40-ml Vials | HCL | 14 days |
| 1,2 - Dichloroethane | 3, 40-ml Vials | HCL | 14 days |
| 1,1-Dichloroethene | 3, 40-ml Vials | HCL | 14 days |
| Methylene Chloride | 3, 40-ml Vials | HCL | 14 days |
| N-nitrosodiphenylamine | 2, 1-Liter Ambers | None | 7 days |
| Toluene | 2, 1-ml Vials | HCL | 14 days |

VI.E. POINT OF COMPLIANCE

The point of compliance (POC) at which the groundwater protection standard of Condition VI.C applies, and at which monitoring must be conducted, are the vertical intervals intercepted by the wells identified in Condition VI, Table 2. The horizontal limit of compliance must be the surface following an imaginary line connecting the risers of monitoring wells. The vertical limit of compliance must be the uppermost aquifer.

When contamination is detected at or beyond the point of compliance for the regulated unit, additional monitoring must be conducted per Condition VI.I.6. This shall include the next vertical aquifer or permeable zone below the uppermost monitored zone. Until such time as hazardous constituents are no longer detected at the point of compliance and beyond, the groundwater quality at each monitoring well (e.g., point of compliance wells, plume defining wells and recovery wells) identified in Condition VI, Table 2 must be monitored. Additional monitoring wells will be installed, as required.

In the event that hazardous constituents or indicator parameters are detected at or beyond the point of compliance above the groundwater protection standard, the Permittee shall institute a Corrective Action Program per Condition VI.J. During the Corrective Action Program, the groundwater quality must be monitored in order to determine the effectiveness of the corrective action.

VI.F. COMPLIANCE PERIOD

A compliance period is required when a Compliance Monitoring Program (Condition VI.I) and/or Corrective Action Program (Condition VI.J) is established. During the compliance period, the Permittee must determine whether the regulated units are in compliance with the groundwater protection standard at the point of compliance. The compliance period during which the groundwater protection standard of LAC 33:V.3305.A applies is until the Administrative Authority has accepted the certification of completion of post-closure care

required by regulation and under Condition III.O.7 of this permit. (The Permittee may submit documentation establishing the formal end date of the compliance period.)

If a Corrective Action Program has been implemented, the compliance period cannot end until after the Permittee has demonstrated that the corrective action has been effectively implemented and the groundwater protection standard has not been exceeded for a period of three (3) consecutive years.

VI.G. GENERAL REQUIREMENTS

VI.G.1. The Permittee's groundwater monitoring system for the previously identified hazardous waste management units in Table 1 must consist of all wells as listed in Condition VI, Table 2, unless changed in the future by the Administrative Authority through permit modification.

VI.G.2. The Permittee must maintain the structural and mechanical integrity and provide protection from accidental damage and surface infiltration for all wells (including piezometers) described in Condition VI, Table 2. The Permittee must implement a well inspection schedule and submit a written report to the Administrative Authority on any damage in accordance with Condition II.E.22 of this permit. A well cannot be abandoned unless exempted from the program at a later date by the Administrative Authority, or unless the integrity of the well is threatened. In such a case, the well must be replaced in conformance with a workplan approved by the Administrative Authority (see Condition VI.K – Construction and Abandonment of Monitoring Wells and Geotechnical Boreholes).

VI.G.3. Upgradient wells must always yield groundwater samples from the uppermost water bearing zone that are representative of groundwater that has not been affected by possible leakage from the regulated units. Downgradient and vertical point of compliance wells must yield groundwater samples from the water bearing zones that represent the quality of groundwater beneath the units that flows to the points of compliance.

VI.G.4. Each well must be measured for total depth and depth to water on the same day and prior to purging. Measurements must be to the nearest 0.1 foot. If 10% of the screened interval is blocked by sediments, the well must be redeveloped prior to the next required sampling event.

VI.G.5. Each well must be purged by evacuation to dryness or by removing a minimum of three casing volumes. The wells must be sampled immediately upon purging and/or when sufficient water for sampling has recharged the well. Other evacuation techniques (e.g., micro-purging) must be approved by the Administrative Authority prior to use. Purging methods must be consistent throughout the monitoring period.

VI.G.6. Samples must be withdrawn using dedicated or adequately cleaned equipment for each well. No equipment or method may be used that will chemically alter or

influence the sample. Sampling devices other than bailers must be approved by the Administrative Authority prior to use. Care must be taken to avoid placing clean sampling equipment on the ground or on any contaminated surface. Sampling methods and equipment must be compatible throughout the monitoring period.

VI.G.7. Groundwater samples shall be monitored and analyzed for turbidity. Samples containing less than five (5) NTU (nephelometric turbidity unit) are acceptable for analysis when the analytical method is sensitive to turbidity (such as the analysis of metals). Samples containing greater than five (5) NTU are only acceptable when well development is certified by a qualified geologist as "the best obtainable". An evaluation of turbidity must accompany all potentially affected analytical values.

VI.G.8. Standard indicators (e.g., specific conductance, pH, etc.) listed in Condition VI, Table 3 must be measured and will be used to indicate well integrity and possible groundwater contamination.

VI.G.9. A chain of custody protocol must be employed that will allow for tracking possession and handling of samples from the time of collection through laboratory analysis. All sample containers must be labeled to prevent misidentification, have proper seals, and indicate the required analytical tests.

VI.G.10. Sample preservation, handling and analysis must meet of the specifications of LAC 33:V.3315.D and 3315.E and Test Methods for Evaluating Solid Waste Physical/Chemical Methods 3rd Edition (EPA Publication Number SW-846, as amended) or an equivalent substitute (approved by the Administrative Authority prior to implementation). Containers, preservation methods and analytical limits are listed in Condition VI, Table 4 of this permit.

VI.G.11. The Permittee must use one of the statistical procedures outlined in the most current approved facility Sampling and Analysis Plan or LAC 33:V.3315.H in determining whether concentrations have been exceeded for the hazardous constituents specified in Condition VI, Table 3.

VI.G.12. Records of all sampling and analytical work must be maintained at the site during the life of the units, including the post-closure care period. An up-to-date field log book (or compilation of field sheets) must be kept at the site which documents, as a minimum, the following for each sample:

- well identification number;
- total well depth;
- elevation of top of casing;
- water elevations;
- calculations of the standing water volume in the well;
- water color (visual) and odor;
- field measurements and methods (pH, specific conductance, etc.);
- well evacuation procedures and equipment;

- total volume of water evacuated;
- sample withdrawal procedures and equipment;
- name of collector, sample date and time;
- sample identification numbers; and
- other field observations.

VI.G.13. Reporting and notification requirements shall be in accordance with Condition VI.L.

VI.H. DETECTION MONITORING PROGRAM

RESERVED- Permittee currently in the Compliance Monitoring Program as per Condition VI.I.

VI.I. COMPLIANCE MONITORING PROGRAM

The Permittee must conduct a Compliance Monitoring Program in accordance with LAC 33:V.3319 and as subsequently directed by the Administrative Authority. A Compliance Monitoring Program is required whenever hazardous constituents have been detected at the point of compliance for a regulated unit. The Permittee must continue or expand the Compliance Monitoring Program until one of the following occurs: 1) the compliance period has ended and the permit is modified to reestablish a Detection Monitoring Program based upon background levels; or 2) a Corrective Action Program is established with adequate monitoring as delineated in Condition VI.J and LAC 33:V.3321.D, and the permit is modified accordingly.

VI.I.1. Monitoring for Determining Compliance with the Groundwater Protection Standard

The Permittee must utilize the groundwater monitoring system outlined in Conditions VI.B through VI.G and as required by LAC 33:V.3315 to monitor the groundwater to determine whether regulated units are in compliance with the groundwater protection standard. Accordingly, the Permittee shall determine the concentration of each hazardous constituent and indicator parameter listed in Condition VI, Table 3 of this permit at least semi-annually from groundwater in the wells listed in Condition VI, Table 2 of this permit.

VI.I.2. The Permittee must determine whether there is statistically significant evidence of contamination above the groundwater protection standard for any hazardous constituent or indicator parameter specified in Condition VI.D. Statistical methods shall conform to Condition VI.G.11 and shall be completed within ninety (90) days of the groundwater monitoring event. The Permittee may request an extension in writing if there is a delay in receiving the analytical results.

VI.I.3. If the Permittee determines, pursuant to Condition VI.I.2, that there is statistically significant evidence of contamination above the groundwater protection standard for any hazardous constituent and or indicator parameter, the Permittee must do the following:

VI.I.3.a. notify the Administrative Authority in writing within seven (7) days of this finding. The notification must indicate the constituent(s) which have been exceeded and their respective concentration limit(s); and

VI.I.3.b. submit an application for a permit modification to establish a Corrective Action Program meeting the requirements of LAC 33:V.3321 within 180 days (or ninety (90) days if the Permittee has previously submitted a certified engineering feasibility study under LAC 33:V.3317.G.5.b). The application must include the following information:

VI.I.3.b.(1) a detailed description and schedule for additional monitoring and corrective action that will achieve compliance with the groundwater protection standard specified in Conditions VI.C and VI.D of this permit; and

VI.I.3.b.(2) a geotechnical plan (certified by a qualified geologist or a geotechnical engineer) to demonstrate the effectiveness of the planned corrective action. This plan may incorporate the Compliance Monitoring Program developed to meet the requirements of this permit, except that the Permittee will be required to also monitor as frequently as necessary to demonstrate the effectiveness of the corrective action.

VI.I.4. If the Permittee determines, pursuant to Condition VI.I.2, that there is statistically significant evidence of contamination above the groundwater protection standard for any hazardous constituent or indicator parameter, the Permittee may demonstrate that a source other than a regulated unit caused the contamination, or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation, or natural variation in the groundwater. The Permittee may make a demonstration under this Condition in addition to, or in lieu of, submitting a permit modification application; however, the Permittee is not relieved of the requirement to submit a permit modification application within the time specified in Condition VI.I.3.b unless the demonstration made under this Condition successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this Condition, the Permittee must:

VI.I.4.a. Notify the Administrative Authority in writing within seven (7) days that the Permittee intends to make a demonstration under this Condition;

VI.I.4.b. Within ninety (90) days, submit a report to the Administrative Authority which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standard resulted from an error in sampling, analysis or evaluation;

VI.I.4.c. Within ninety (90) days, submit to the Administrative Authority an application for a permit modification to make any appropriate changes to the Compliance Monitoring Program; and

VI.I.4.d. Continue to monitor in accordance with the Compliance Monitoring Program established under this permit.

VI.I.5. Annual Monitoring for LAC 33:V.3325, Table 4 Constituents

The Permittee must utilize the groundwater monitoring system outlined in Conditions VI.B through VI.G and as required by LAC 33:V.3315 to monitor the groundwater to determine whether hazardous constituents listed in LAC 33:V.3325, Table 4 are present in the uppermost aquifer (and, if so, at what concentration). Accordingly, the Permittee shall determine the concentration of each hazardous constituent listed in LAC 33:V.3325, Table 4 annually from all point of compliance wells listed in Condition VI, Table 2 of this permit.

VI.I.5.a. The Permittee must determine whether there is statistically significant evidence of additional hazardous constituents not previously identified. Statistical methods shall conform to Condition VI.G.11 and shall be completed within ninety (90) days of the groundwater monitoring event. The Permittee may request an extension in writing if there is a delay in receiving the analytical results.

Should results indicate that additional hazardous constituents are present, the Permittee may either resample for any of the constituents pursuant to Condition VI.I.5.b or report these additional constituents to the Administrative Authority and add them to the monitoring list and modify the permit pursuant to Condition VI.I.5.c.

VI.I.5.b. If the Permittee finds LAC 33:V.3325, Table 4 constituents in the groundwater that are not already identified in the permit as monitoring constituents, the Permittee may indicate in the report to the Administrative Authority (Condition VI.I.5.a) that the Permittee intends to re-sample and repeat LAC 33:V.3325, Table 4 analysis. This re-sampling must be performed within one month of the report submittal (Condition VI.I.5.a). The Permittee must report the concentrations of these additional constituents to the Administrative Authority within sixty (60) days of the groundwater monitoring event. Should results indicate that additional hazardous constituents are present, the Permittee must add them to the monitoring list and modify the permit pursuant to Condition VI.I.5.c.

VI.I.5.c. The Permittee must submit a permit modification application to add the additional constituents to Condition VI.D Table 3 and Table 4 of this permit in accordance with LAC 33:V.321 and Condition II.C of this permit.

VI.I.6. Additional Monitoring Requirements

As part of the Compliance Monitoring Program, the plume must be defined and monitored by additional monitoring wells (a.k.a., assessment, plume defining, downgradient monitor wells, etc.) to satisfy LAC 33:V.3315.A.3.

VI.I.6.a. The additional monitoring wells listed in Condition VI, Table 2 must be sampled according to a frequency approved by the Administrative Authority (semi-annually), as part of the on-going evaluation of the plume, for constituents specified in Condition VI, Table 3.

VI.I.6.b. If the Permittee determines that there is statistically significant evidence of contamination for hazardous constituents or indicator parameters at any downgradient well previously reported as non-detect, the Permittee must notify the Administrative Authority of the finding in writing within seven (7) days. This notification must indicate what hazardous constituents or indicator parameters have shown statistically significant evidence of contamination. Further, the Permittee must do one of the following:

VI.I.6.b(1) Submit a workplan to the Administrative Authority within ninety (90) days from the date of the confirmation of contamination. The workplan must detail the specific additional assessment procedures the Permittee will conduct to identify the full extent of the plume. The workplan shall include any proposed changes to the groundwater monitoring system, monitoring frequency, sampling and analysis procedures and methods, and/or statistical methods; or

VI.I.6.b(2) Demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the groundwater. The Permittee may make a demonstration under this Paragraph in addition to, or in lieu of, submitting an assessment workplan; however, the Permittee is not relieved of the requirement to submit an assessment workplan within the time specified unless the demonstration made under this Paragraph successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this Paragraph the Permittee must:

VI.I.6.b(2)(a) Specify the Permittee's intention to make a demonstration under this Paragraph when notifying the Administrative Authority of the statistically significant evidence of contamination;

VI.I.6.b(2)(b) Within ninety (90) days, submit a report to the Administrative Authority that demonstrates that a source other than

a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation. Further, the Permittee must submit an application for a permit modification to make any appropriate changes to the monitoring program; and

VI.I.6.b.(2).c. Continue to monitor in accordance with the monitoring program established under this permit.

VI.I.7. Changes to the Compliance Monitoring Program

If the Permittee determines that the Compliance Monitoring Program no longer satisfies the requirements of this permit, the Permittee must within ninety (90) days submit an application for a permit modification to make any appropriate changes to the program.

Any time the Administrative Authority determines that the Compliance Monitoring Program does not satisfy the requirements of this permit, the Permittee shall, within ninety (90) days of notification of such determination, submit an application for a permit modification to make any appropriate changes to the program.

VI.J. CORRECTIVE ACTION PROGRAM

(RESERVED - The Permittee currently is in the Compliance Monitoring Program as per Condition VI.I. The requirements of VI.J [in *italics*] are included for informational purposes only and are meant to provide a course of action in the event a Corrective Action Program is required. In the event a Corrective Action Program is required, the permit will be modified in accordance with LAC 33:V.321 and Condition VI.I of this permit and the requirements of VI.J will become enforceable.)

A Corrective Action Program is required whenever the groundwater protection standard has been exceeded at or beyond the point of compliance for a regulated unit. The Permittee must continue or expand the Corrective Action Program in accordance with the requirements of LAC 33:V.3321 and as subsequently directed by the Administrative Authority to the fullest extent until groundwater problems are abated. The Corrective Action Program shall be initiated and completed by the Permittee within a period of time specified by the Administrative Authority and until such time as this requirement is terminated through permit modification.

VI.J.1. Corrective Action Objectives

The Corrective Action Program must:

VI.J.1.a. protect human health and the environment;

VI.J.1.b. attain compliance with the groundwater protection standard as specified in Condition VI.C;

VI.J.1.c. control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of hazardous constituents or indicator parameters into the environment that may pose a threat to human health or the environment;

VI.J.1.d. meet applicable statutory and regulatory requirements; and

VI.J.1.e. meet acceptable waste management requirements.

VI.J.2. Implementation and Monitoring of the Corrective Action Program

The Permittee must implement the Corrective Action Program according to the approved Corrective Action Plan and schedule contained therein.

VI.J.2.a. The Permittee must conduct groundwater monitoring as described in the approved corrective action plan. The groundwater monitoring program:

VI.J.2.a.(1). may be based upon the requirements of the Compliance Monitoring Program (Condition VI.I);

VI.J.2.a.(2). must be as effective as the Compliance Monitoring Program in determining compliance with the groundwater protection standard; and

VI.J.2.a.(3). must indicate the effectiveness of the corrective action and have ongoing assessment monitoring.

VI.J.2.b. The Permittee must evaluate and report the effectiveness and progress of the corrective action semi-annually to the Administrative Authority as required by LAC 33:V.3321.G and in accordance with Condition VI.L.1.o. The evaluation shall include the following:

VI.J.2.b.(1). general discussion on the effectiveness of the corrective action in achieving the corrective action goals, and progress being made toward completion;

VI.J.2.b.(2). trend analysis and updated schedule for completion of the corrective action;

VI.J.2.b.(3). evaluation of performance reliability, ease of implementation and any encountered concerns or problems;

VI.J.2.b.(4). any changes to surrounding land use or environmental receptors that may impact effectiveness;

VI.J.2.b.(5). recommendations for improvement;

VI.J.2.b.(6). recovered amounts for each component of a recovery system (e.g., recovery wells, French drain systems, etc.) and the entire system; recovered amounts for both contaminants and all liquids; recovered amounts for both the reporting period and since recovery implementation; and

VI.J.2.b.(7). graphical and statistical analyses, as necessary, to demonstrate the effectiveness and progress (the Administrative Authority may also require predictive computer modeling, as per LAC 33:V.3303.D).

VI.J.3. Revisions to the Corrective Action Program

If the Permittee determines that the Corrective Action Program (including monitoring) no longer satisfies the requirements of this permit, the Permittee, within ninety (90) days, shall submit an application for a permit modification to make any appropriate changes to the program.

Any time the Administrative Authority determines that the Corrective Action Program does not satisfy the requirements of this permit, the Permittee shall, within ninety (90) days of notification of such determination, submit an application for a permit modification to make any appropriate changes to the program.

VI.J.4. Completion of Corrective Action Program

If the Permittee is conducting corrective action at the end of the compliance period, the Permittee must continue for as long as necessary to achieve compliance with the groundwater protection standard. The Corrective Action Program may be terminated when the groundwater protection standard is being met at the point of compliance and throughout the entire zone affected by the release for at least three (3) consecutive years.

VI.J.4.a. The Permittee must demonstrate to the satisfaction of the Administrative Authority that the groundwater protection standard is being met.

VI.J.4.b. Upon successful demonstration from the Permittee that the corrective action should be terminated, the Permittee must submit to the Administrative Authority an application for permit modification pursuant to LAC 33:V.321. The application will include provisions to establish either a Detection Monitoring Program or Compliance Monitoring Program on a schedule approved by the Administrative Authority.

VI.J.4.c. Upon modification of the permit, the Permittee shall be released from the requirements for financial assurance for corrective action under LAC 33:V.3301.B.

VI.K. CONSTRUCTION AND ABANDONMENT OF MONITORING WELLS AND GEOTECHNICAL BOREHOLES

The construction and abandonment of groundwater monitoring wells must conform to the standards and guidelines specified in "**CONSTRUCTION OF GEOTECHNICAL BOREHOLES AND GROUNDWATER MONITORING SYSTEMS HANDBOOK**", dated May 1993 ("Construction Handbook", May 1993). This document is printed by and available from the Louisiana Department of Transportation and Development (DOTD), Water Resources Section, P.O. Box 94245, Baton Rouge, Louisiana 70804-9245.

VI.K.1. A workplan for the construction of a new well must be submitted to the Administrative Authority for approval as the entire groundwater monitoring system must be approved. Any required new well should be installed within thirty (30) days of approval of the workplan by the Administrative Authority. Upon completion of new or replacement well, a copy of DOTD-GW-1 S, DOTD Well Registration Short Form, is to be provided to the Administrative Authority.

VI.K.2. The Permittee must provide for the sealing of any vertical migration path resulting from exploratory boring, leachate collection or detection systems and/or groundwater monitoring programs as provided in LAC 33:V.3323. A workplan for the plugging and abandonment of a well must be submitted for approval by the Administrative Authority, whenever such migration pathways are discovered. Upon completion of well abandonment, a copy of DOTD-GW-2, DOTD Well Plugging and Abandonment Form, is to be provide to the Administrative Authority.

VI.L. REPORTING AND NOTIFICATION REQUIRMENTS

VI.L.1. Semi-Annual Groundwater Report

A semi-annual groundwater report for the point of compliance wells must be submitted to the Administrative Authority for each six-month period. The report shall include the following:

VI.L.1.a. a general discussion on sampling, analytical, statistical and QA/QC procedures;

VI.L.1.b. a table showing well number, well depth, interval screened, zone monitored, well diameter, screen and casing material (and the type of pump, if applicable) for all wells;

VI.L.1.c. a facility map showing all wells (up-gradient, point of compliance, assessment, plume defining and recovery) and identifying zones in which wells are screened;

VI.L.1.d. a scaled potentiometric surface map showing well locations, groundwater elevations with respect to mean sea level for each monitored zone;

VI.L.1.e. documentation of the chain of custody of all sampling and analyses;

VI.L.1.f. all analytical data, including QA/QC;

VI.L.1.g. a tabular summary of all analytical data;

VI.L.1.h. a statistical method shall be used in evaluating data for each required indicator parameter (e.g., pH, specific conductance, total organic carbon, total organic halogen) and hazardous constituent, as approved by the Administrative Authority;

VI.L.1.i. tables and graphical representation of the values of the required indicator parameters and the hazardous constituents including:

VI.L.1.i.(1). contaminant concentration isopleth maps;

VI.L.1.i.(2). contaminant concentration versus time graphs;

VI.L.1.j. a statement of whether a statistically significant difference in concentration is detected;

VI.L.1.k. a discussion of any significant changes in the data from the last reporting period;

VI.L.1.l. a discussion of inspections and maintenance of the groundwater monitoring system, physical condition of the wells, including down time for any well or part of the system and actions taken to return the system to normal operations and maximum efficiency;

VI.L.1.m. a discussion of water-quality properties (i.e., color, odor, etc.);

VI.L.1.n. disposition of purge water and other potentially contaminated materials;
and

VI.L.1.o. evaluation of the effectiveness and progress of any corrective action according to Condition VI.J.2.b.

VI.L.2. Annual Groundwater Report

An annual groundwater report must be submitted to the Administrative Authority no later than March 1st of the following calendar year as required by LAC 33:V.1529.D.8.

VI.L.2.a. The report must contain the reporting requirements of Condition VI.L.1 for the final semi-annual sampling period.

VI.L.2.b. In addition, the report must summarize and interpret all groundwater activities for the preceding calendar year including an evaluation of the monitoring strategy in relation to the direction of groundwater flow and locations of wells associated with the units. Applicable calculations must also include groundwater flow rates, contaminant migration rates (as applicable), statistical comparisons, trend analyses, and any other pertinent information regarding the adequacy of the monitoring system.

VI.L.3. Notification of Statistically Significant Evidence of Contamination

The Permittee must notify the Administrative Authority in accordance with Conditions VI.H, VI.I or VI.J when there is statistically significant evidence of contamination for hazardous constituents or indicator parameters.

VI.L.4. Notification of Release to SPOC

In the event of a release in, into, within, or on any groundwaters of the state, (i.e., any confirmation of contamination in any previously uncontaminated saturated subsurface strata) the Permittee must notify the Department within twenty-four (24) hours of confirming statistically significant evidence of a release. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC) in accordance with LAC 33:309.L.7 and Condition II.E.16 of this permit. This requirement is in addition to notification requirements to the Administrative Authority discussed in Conditions VI.H, VI.I or VI.J.

**HAZARDOUS
AND
SOLID WASTE
AMENDMENTS**

VII. GENERAL CONDITIONS PURSUANT TO THE HAZARDOUS AND SOLID WASTE AMENDMENTS

VII.A. STANDARD CONDITIONS

VII.A.1. Waste Minimization

Annually, by March 1, for the previous year ending December 31, the Permittee shall enter into the operating record as required by LAC 33:V.1529.B.19, a statement certified according to LAC 33:V.513.A specifying that the Permittee has a program in place to reduce the volume and toxicity of hazardous wastes generated by the facility's operation to the degree determined by the Permittee to be economically practicable; and that the proposed method of treatment, storage, or practicable disposal method that is currently available to the Permittee minimizes the present and future threat to human health and the environment. A current description of the program shall be maintained in the operating record and a copy of the annual certified statement shall be submitted to the Administrative Authority. The following criteria should be considered for the program:

VII.A.1.a. Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility;

VII.A.1.b. Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;

VII.A.1.c. An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste;

VII.A.1.d. Factors that have prevented implementation of source reduction and/or recycling;

VII.A.1.e. Sources of information on source reduction and/or recycling received at the facility (e.g., local government, trade associations, suppliers, etc.);

VII.A.1.f. An investigation of additional waste minimization efforts that could be implemented at the facility. This investigation would analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis would include an assessment of the technical feasibility, cost, and potential waste reduction for each option;

VII.A.1.g. A flow chart or matrix detailing all hazardous wastes the facility produces by quantity, type, and building/area;

VII.A.1.h. A demonstration of the need to use those processes that produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste;

VII.A.1.i. A description of the waste minimization methodology employed for each related process at the facility. The description should show whether source reduction or recycling is being employed;

VII.A.1.j. A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years; and

VII.A.1.k. The Permittee may meet the requirements for waste minimization by developing an Environmental Management System according to the EPA document, Integrated Environmental Management System Implementation Guide, EPA 744-R-00-011, October 2000, found on www.epa.gov/opptintr/dfe/pubs/iems/iems_guide/index.htm.

VII.A.2. Dust Suppression

Pursuant to LAC 33:V.4139.B.4, and the Toxic Substances Control Act, the Permittee shall not use waste or used oil or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment.

VII.A.3. Failure to Disclose

The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts at any time may be cause for termination or modification of this Permit in accordance with LAC 33:323.B.2 and 3.

VII.A.4. Suspension, Modification, or Revocation and Reissuance, and Termination of Permit

This Permit may be modified, revoked and reissued, or terminated for cause as specified in LAC 33:V.323. The filing of a request by the Permittee for a permit modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition.

VII.A.4.a. If the Administrative Authority tentatively decides to modify or revoke and reissue a permit under LAC 33:V.321.C. or 323, a draft permit shall be prepared incorporating the proposed changes. The Administrative Authority may request additional information and, in the case of a modified permit, may require the submission of an updated permit application.

VII.A.4.b. The Permittee may initiate permit modification proceedings under LAC 33:V.321.C. All applicable requirements and procedures as specified in LAC 33:V.321.C shall be followed.

VII.A.4.c. Modifications of this Permit do not constitute a reissuance of the Permit.

VII.A.5. Permit Review

This Permit may be reviewed by the Administrative Authority five years after the date of permit issuance and may be modified as necessary as provided for in LAC 33:V.321.C. Nothing in this section shall preclude the Administrative Authority from reviewing and modifying the Permit at any time during its term.

VII.A.6. Compliance with Permit

Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA except for those requirements not included in the permit which:

VII.A.6.a. Become effective by statute;

VII.A.6.b. Are promulgated under LAC 33:V.Chapter 22 restricting the placement of hazardous wastes in or on the land; or

VII.A.6.c. Are promulgated under LAC 33:V.Chapters 23, 25 and 29 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, construction quality assurance (CQA) programs, monitoring action leakage rates, and response action plans, and will be implemented through the procedures of LAC 33:V.321.C Class 1 permit modifications.

VII.A.7. Specific Waste Ban

VII.A.7.a. The Permittee shall not place in any land disposal unit the wastes specified in LAC 33:V. Chapter 22 after the effective date of the prohibition unless the Administrative Authority has established disposal or treatment standards for the hazardous waste and the Permittee meets such standards and other applicable conditions of this Permit.

VII.A.7.b. The Permittee may store wastes restricted under LAC 33:V.Chapter 22 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of LAC 33:V.2205 including, but not limited to, clearly marking each tank or container.

VII.A.7.c. The Permittee is required to comply with all applicable requirements of LAC 33:V.2245 as amended. Changes to the Waste Analysis Plan will be considered permit modifications at the request of the Permittee, pursuant to LAC 33:V.321.C.

VII.A.7.d. The Permittee shall review the Waste Analysis Plan and analyze the waste when a process changes to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record pursuant to Condition III.C.1 and 2.

VII.A.8. Information Submittal for the Corrective Action Strategy

Failure to comply with any condition of the Permit, including information submittals, constitutes a violation of the Permit and is grounds for enforcement action, permit amendment, termination, revocation, suspension, or denial of permit renewal application. Falsification of any submitted information is grounds for termination of this Permit (LAC 33:V.323.B.3).

The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Administrative Authority required by this Permit using the Corrective Action Strategy are signed and certified in accordance with LAC 33:V.Chapter 5, Subchapter B. All submittals required under the Corrective Action Strategy must conform to those requirements outlined in the RECAP (see Condition VIII of this permit). Variance from content and/or formatting guidelines provided under the RECAP shall be requested by the Permittee prior to submittal to the Administrative Authority, as deemed necessary. Approval or disapproval of such a request with further guidance on content and formatting will be provided by the Administrative Authority, as deemed necessary. Five (5) copies each of these plans, reports, notifications or other submissions and one (1) electronic copy (3.5" IBM compatible disk or CD-ROM) of all portions thereof which are in word processing format shall be submitted to the Administrative Authority by Certified Mail or hand delivered to:

**Louisiana Department of Environmental Quality
Office of Environmental Assessment
Environmental Technology Division
P.O. Box 4314
Baton Rouge, LA 70821-4314**

A summary of the planned reporting milestones pursuant to the corrective action requirements of this Permit is found in Condition VIII, Table 1.

VII.A.9. Data Retention

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken

pursuant to this Permit shall be maintained at the facility during the term of this Permit, including any reissued Permits.

VII.A.10. Management of Wastes

All solid wastes which are managed pursuant to a remedial measure taken under the corrective action process or as an interim measure addressing a release or the threat of a release from a solid waste management unit shall be managed in a manner protective of human health and the environment and in compliance with all applicable Federal, State and local requirements. As a response to the Louisiana Legislature mandate La. R.S. 30:2272 (Act 1092 of the 1995 Regular Session) to develop minimum remediation standards, the LDEQ promulgated the Risk Evaluation Corrective Action Program (RECAP). RECAP's tiered approach to risk evaluation and corrective action establishes not only across the board numerical standards for most media, but also allows for the development of more site-specific numerical standards, as warranted. The Permittee is required to comply with all applicable requirements of RECAP. Approval of units for managing wastes and conditions for operating the units shall be granted through the permitting process.

VII.B. EMISSION STANDARDS - PROCESS VENTS, EQUIPMENT LEAKS, TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS (AA-BB AIR REGULATIONS)

(RESERVED)

VII.C. SPECIFIC CONDITION - CLOSURE

(RESERVED)

VIII. SPECIAL CONDITIONS PURSUANT TO HAZARDOUS AND SOLID WASTE AMENDMENTS—CORRECTIVE ACTION STRATEGY

Corrective Action for Releases: Section 3004(u) of RCRA, as amended by the Hazardous and Solid Waste Amendments (HSWA), and LAC 33:V.3322 require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility, regardless of when the waste was placed in the unit.

EPA's traditional RCRA corrective action approach is structured around several elements common to most activities. In the first phase, RCRA facility assessment (RFA), EPA or the authorized state assesses the facility to identify releases and determine the need for corrective action. In the second phase, RCRA facility investigation (RFI), the facility conducts a more detailed investigation to determine the nature and extent of contaminants released to ground water, surface water, air, and soil. If remedial action is needed, a third phase, corrective measures study (CMS), is started. During this phase, the facility conducts a study, which when completed, describes the advantages, disadvantages, and costs of various cleanup options. After selection of a final remedy, the fourth phase, corrective measures

implementation (CMI), is initiated. The facility is required to design, construct, operate, maintain, and monitor the final remedy(s).

The Corrective Action Strategy (CAS) is an alternate corrective action approach that can be implemented during any phase of corrective action for a release area. The Permittee shall use the CAS approach as the framework for corrective action to clarify, facilitate and expedite the process, and shall use the **Louisiana Department of Environmental Quality Risk Evaluation/Corrective Action Program (RECAP)** for screening and media-specific cleanup standards. EPA has interpreted the term "release" to mean, "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." (50 FR 2873, July 15, 1985). The CAS refers to "release areas" as solid waste management units (SWMUs) and areas of concern (AOCs) while the RECAP refers to release areas as areas of investigation (AOIs). SWMUs and AOCs may also be referred to as "AOIs" when investigated and managed under the RECAP.

VIII.A. ALTERNATE CORRECTIVE ACTION

VIII.A.1. Introduction to the CAS

This Permit will utilize the CAS Guidance Document (www.epa.gov/Arkansas/6pd/rcra_c/pd-o/riskman.htm) developed by the U.S. Environmental Protection Agency (EPA) Region 6 whenever the Administrative Authority determines that it will serve to facilitate the corrective action. The CAS Guidance Document shall be utilized to the fullest extent practicable for planning and implementation of the corrective action. The CAS in this Permit shall not supersede existing Federal, State, and local regulations. The two primary objectives are to prioritize corrective action at the facility, and streamline corrective action administrative procedures, resulting in the protection of human health and the environment.

The CAS is a performance-based approach; using data quality objectives, investigations begin with the endpoint in mind. The CAS is a risk management strategy that can be implemented during any phase of corrective action. However, the CAS need not be applied to work that has already been completed to the satisfaction of the Administrative Authority. Performance standards are established at the beginning of the corrective action process, allowing earlier and more focused implementation. Releases are screened using RECAP screening numbers to determine the priority of corrective action, and remedial alternatives are selected on the basis of their ability to achieve and maintain the established performance standards.

There is no one specific path through the CAS process. The CAS is a facility-wide approach, focusing corrective action on releases that pose the greatest risk first. Screening releases will also enable some areas of interest to qualify for no further action at this time (Condition VIII.A.3.a.), thus resources can be used to best benefit the protection of human health and the environment. The CAS process also considers activities previously conducted under the traditional corrective action process. Appendix 1 of this permit contains a summary of corrective action activities

completed to date and also describes where the Permittee is in the CAS process at the time of issuance of this permit. The applicability of various provisions of the CAS will depend on where the Permittee is in the CAS process as detailed in Appendix 1.

The traditional RCRA corrective action process and reports (i.e., RFIs, CMSs, CMIs, etc.) are not elements of the CAS. However, the use of information and reports from the traditional corrective action process, if available, is encouraged, in addition to new site-specific information.

The Administrative Authority, through an agency-initiated permit modification, may remove the CAS as the means of facility-wide corrective action in the case of the failure of the Permittee to disclose information, abide by the terms and conditions of this permit, adhere to agreed schedules, or show adequate progress; or should an impasse occur between the Permittee and the Administrative Authority. The Administrative Authority will institute other means of corrective action (such as traditional corrective action) at the facility through modification of this permit.

VIII.A. 2. Performance Standards

Expectations for the outcome of corrective action at a facility are established in the CAS by three performance standards as defined in Conditions VIII.A.2.a through c. The Permittee's proposed performance standards shall be presented during the scoping meeting. The Permittee must justify the proposed performance standards through evaluation and documentation of land use, ground water designation (current and reasonably expected future use), types of receptors present, exposure pathways, etc.; as described in RECAP, Chapter 2. Through the application of the performance standards and RECAP, the Permittee and Administrative Authority shall determine whether a release must be addressed through corrective action, and whether implemented corrective actions are protective of human health and the environment.

The Permittee shall submit the performance standards in writing along with the Conceptual Site Model (Condition VIII.D) within one-hundred and twenty (120) days after the scoping meeting. The Administrative Authority may either approve the performance standards proposed by the Permittee or establish performance standards that the Administrative Authority deems necessary to protect human health and the environment.

The three CAS performance standards are defined below. The order in which the performance standards are listed does not indicate that one performance standard takes priority over another. All applicable performance standards must be achieved by the Permittee.

VIII.A.2.a. Source Control Performance Standard

Source control refers to the control of materials that include or contain hazardous wastes or hazardous constituents that act as a reservoir for

migration of contamination to soil, sediment, ground water, surface water, or air, or as a source for direct exposure.

The facility must determine if source material is present. Removal, containment, treatment, or a combination of the three, must be evaluated on a case-by-case basis. Controlling source material is a predominating issue in the CAS, and must be addressed to ensure protectiveness over time. Prioritization of the SWMUs and AOCs does not mean avoidance of controlling source materials.

VIII.A.2.b. Statutory and Regulatory Performance Standard

Applicable statutory and regulatory requirements (Federal, State, and local) must be identified. These requirements may dictate media-specific contaminant levels (e.g., maximum contaminant levels (MCLs) in drinking water) that must be achieved and may become a performance standard for the Permittee.

VIII.A.2.c. Final Risk Goal Performance Standard

The final risk goal is the level of protection to be achieved and maintained by the Permittee. The final risk goal shall be based on site-specific issues including land use, special subpopulations, contaminant concentrations based on acceptable risk, location at which the levels are measured, and the remediation time frame, as specified by RECAP.

One final risk goal may apply to the entire facility, but it is more likely that different releases will require different final risk goals due to variations in location of releases, land use, proximity of receptors, etc. The final risk goal will be based on sound risk assessment methodologies (Condition VIII.A.3).

VIII.A.3. Use of RECAP

The latest edition of the RECAP document shall be used by the Permittee to determine the need for further corrective actions under this permit. The RECAP consists of a tiered framework comprised of a Screening Option (SO), and three Management Options (MO). The tiered management options allow site evaluation and corrective action efforts to be tailored to site conditions and risks. As the MO level increases, the approach becomes more site-specific and hence, the level of effort required to meet the objectives of the Option increases.

RECAP shall be used by the Permittee to evaluate data quality and data usability (RECAP Section 2.4 and 2.5), to determine the identity of an AOI as described in RECAP Section 2.6, and for estimations of Area of Investigation Concentrations and Groundwater Compliance Concentrations for each media as defined in RECAP Section 2.8.

RECAP shall be used by the Permittee to evaluate land use as described in RECAP Section 2.9, and groundwater/aquifer use as described in RECAP Section 2.10.

RECAP shall be used by the Permittee to prioritize AOCs, SWMUs, and AOIs that require remediation so site investigations are focused on the release areas that pose the greatest risk. As the CSM is compiled, the Permittee shall assess historical data (RECAP Section 2.5) and use the following management options, as appropriate, to address each release site.

VIII.A.3.a. Use of the Screening Option - The Permittee shall use the Screening Standards (SS) which are LDEQ-derived screening numbers for soil and groundwater for non-industrial and industrial land use scenarios. The SS shall be used to demonstrate that an AOI does not pose a threat to human health and the environment and, hence does not require further action at this time (NFA-ATT) or that further evaluation is warranted under a higher Management Option.

VIII.A.3.b. Use of Management Option 1 - The Permittee shall use Management Option 1 (MO-1) which provides a RECAP standard (RS) derived for non-industrial and industrial exposure scenarios using currently recommended default exposure parameters and toxicity values. Under MO-1, an AOI may warrant a NFA-ATT determination, or if an exposure, source, or compliance concentration detected at the AOI exceeds a MO-1 limiting RS, then the Permittee may; (1) remediate to the MO-1 limiting RS (and comply with closure/post closure requirements for MO-1), or (2) proceed with a MO-2 or MO-3 evaluation.

VIII.A.3.c. Use of Management Option 2 - The Permittee shall use Management Option 2 (MO-2) which provides for the development of soil and groundwater RS using site-specific data with specified analytical models to evaluate constituent fate and transport at the AOI. The results of this evaluation shall be used in conjunction with standard reasonable maximum exposure (RME) assumptions to identify site-specific MO-2 RS. Under MO-2, an AOI may warrant a NFA-ATT determination, or if an exposure, source, or compliance concentration detected at the AOI exceeds a MO-2 limiting RS, then the Permittee may; (1) remediate to the MO-2 limiting RS (and comply with closure/post closure requirements for MO-2), or (2) proceed with a MO-3 evaluation.

VIII.A.3.d. Use of Management Option 3 - The Permittee shall use Management Option 3 (MO-3) which provides the option of using site-specific data for the evaluation of exposure and the evaluation of environmental fate and transport at the AOI. The results of the site-specific evaluation may be to develop site-specific MO-3 RS. Under MO-3, an AOI may warrant a NFA-ATT determination, or if an exposure, source, or compliance concentration detected at the AOI exceeds a MO-3 limiting RS, then the Permittee shall; (1) remediate to the MO-3 RS, (2) conduct

confirmatory sampling, and (3) comply with closure/post closure requirements for MO-3.

VIII.A.4. Corrective Action for Releases Beyond Facility Boundary: Section 3004(v) of RCRA as amended by HSWA, and State regulations promulgated as LAC 33:V.3322.C require corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied.

VIII.A.5. Financial Responsibility: Assurances of financial responsibility for corrective action shall be provided by the Permittee as specified in the Permit following major modification for remedy selection. The Administrative Authority reserves the right to require financial assurance prior to remedy selection based upon facility compliance history, the extent and degree of contamination, financial health of the Permittee, and input from the public.

VIII.A.6. Summary of Corrective Action Activities: A summary of the corrective action activities associated with the facility is provided in Condition VIII, Appendix 1 of this permit. AOCs and SWMUs that are currently being managed or proposed for management under a prescribed corrective action program (e.g., groundwater order, corrective action order, CERCLA) are identified in Condition VIII, Appendix 1, Table 1 of this permit.

VIII.A.7 Approval of Alternate Schedule: The Permittee may submit a written request for an alternate schedule for a submittal deadline as presented in Condition VIII, Table 1. The request should propose a specific alternate schedule and include an explanation as to why the alternate schedule is necessary. The Administrative Authority will consider site-specific criteria in either approving or disapproving the request for an alternate schedule.

VIII.B. PROJECT DEVELOPMENT AND SCOPING MEETING

VIII.B.1. Notice of Intent

The Permittee must submit to the Administrative Authority a Notice of Intent to conduct corrective action using the CAS within sixty (60) days of the effective date of this permit. The notice of intent should state the following in a concise manner:

VIII.B.1.a. General information regarding facility location;

VIII.B.1.b. General information regarding the facility's operational history;

VIII.B.1.c. General discussion on how the Permittee will proceed through the CAS;

VIII.B.1.d. Brief description of proposed performance standards for corrective action; and

VIII.B.1.e. Propose a date for a scoping meeting between the Permittee and the Administrative Authority to be held within sixty (60) days of the date of the Notice of Intent.

VIII.B.2. Scoping Meeting

The scoping meeting will serve as the first CAS milestone where the Permittee and the Administrative Authority identify expectations concerning CAS implementation. The length and extent of the meeting will depend on the complexity of the site. Agreements on land use, groundwater classification, the level of detail required in the conceptual site model (see Condition VIII.D) and expectations for remediation goals will be discussed during the scoping meeting(s). During the scoping meeting the Permittee will present the following information to the Administrative Authority:

VIII.B.2.a. A conceptual site model (if one already has been developed);

VIII.B.2.b. Discussions on history of corrective action at the facility, including facility investigations, risk evaluations or risk assessments, interim measure/stabilizations and final remedies implemented;

VIII.B.2.c. Proposed performance standards for the facility with justification, and potential risk management approaches;

VIII.B.2.d. Discussions on how the Permittee plans to use the CAS to meet its corrective action obligations, including permitting and compliance issues;

VIII.B.2.e. A Communication Strategy Plan that specifies where in the CAS process the Permittee is currently and how the Permittee will provide information about future progress at the facility to the Administrative Authority (i.e., progress reports, conference calls, routine meetings, etc.);

VIII.B.2.f. Site-specific concerns (i.e., sensitive environments or special subpopulations);

VIII.B.2.g. Need for interim measures or stabilization activities, if necessary; and

VIII.B.2.h. Schedule for submittal of the CAS Investigation Workplan and proposed schedule for conducting and completing CAS requirements, including public participation.

Information plans and reports that have already been developed by the Permittee during the corrective action process can be referenced during the

scoping meeting. The Permittee must coordinate with the Administrative Authority in order to determine the date, time, and location of the scoping meeting.

VIII.C. REPORTING REQUIREMENTS

VIII.C.1. The Permittee shall submit, in accordance with Condition VII.A.8, signed reports of all activities conducted pursuant to the provisions of this Permit as required by the Administrative Authority. The reporting schedule shall be determined on a case-by-case basis by the Administrative Authority. These reports shall contain, as applicable to the stage of corrective action, the information required by CAS, as well as the following:

VIII.C.1.a. A description of the work completed and an estimate of the percentage of work completed;

VIII.C.1.b. Summaries of all findings, including summaries of laboratory data;

VIII.C.1.c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;

VIII.C.1.d. Projected work for the next reporting period;

VIII.C.1.e. Summaries of contacts pertaining to corrective action or environmental matters with representatives of the local community, public interest groups or State government during the reporting period;

VIII.C.1.f. Changes in key project personnel during the reporting period; and

VIII.C.1.g. Summaries of all changes made in implementation during the reporting period.

VIII.C.2. Copies of other reports relating to or having bearing upon the corrective action work (e.g., inspection reports, drilling logs and laboratory data) shall be made available to the Administrative Authority upon request.

VIII.C.3. In addition to the written reports as required in Condition VIII.C.1 and VIII.C.2 above, at the request of the Administrative Authority, the Permittee shall provide status review through briefings with the Administrative Authority.

VIII.C.4. The determination and approval of remedy selections, schedules of submittals and minor changes to any corrective action workplans may be made by the Administrative Authority during the scoping meeting or status review briefings as described in Condition VIII.C.3.

VIII.D. SPECIFIC CONDITION – CONCEPTUAL SITE MODEL (CSM)

No later than 120 days after the scoping meeting, the Permittee shall submit to the Administrative Authority a CSM (along with the Performance Standards detailed in Condition VIII.A.2) or an update of any CSM submitted at the scoping meeting providing background information and the current conditions at the facility. The level of detail required for the CSM will be discussed during the scoping meeting. At a minimum, the CSM must address current site conditions, land use, known and/or potential constituent source(s), routes of constituent migration, exposure media (i.e., soil, surface waters, groundwater), exposure points, points of compliance and pathways, receptors and source media to be evaluated under the RECAP. The CSM must include a completed Figure 8 (LAC 33:1.Chapter 13). The Permittee may include completed investigations, existing data, or previously submitted documents in the CSM by reference. References must include the names, dates, and brief summaries of the documents.

If a CSM has been previously developed, the scoping meeting will also provide the opportunity for the Permittee and Administrative Authority to consider and identify all data gaps in the CSM. The initial CSM shall be considered the "base document" to be prepared and updated by the facility as new information is gathered during investigations. The CSM shall be used by the facility to make decisions regarding risk management options, ecological risk, and monitored natural attenuation determinations (RECAP Section 2.16), or technical impracticability (TI) waiver determinations, when appropriate.

The Administrative Authority reserves the right to require revisions to the CSM based upon data resulting from ongoing investigations and activities. Revisions to the CSM may also be required for newly identified SWMUs or AOCs according to Condition VIII.L of this permit (See Appendix 1, Ongoing Corrective Action) and based on new information and information not previously considered by the Administrative Authority.

The CSM shall be divided into Profiles as detailed in Conditions VIII.D.1 through 6. If the Permittee chooses to use existing data and documents in the CSM, it may not be necessary to prepare the Profiles as detailed in Conditions VIII.D.1 through 6. However, the existing documents and data must provide sufficient information and detail which corresponds to the information required by the Facility, Land Use and Exposure, Physical, Release, Ecological, and Risk Management Profiles.

VIII.D.1. Facility Profile

The Permittee shall include in the CSM a Facility Profile which shall summarize the regional location, pertinent boundary features, general facility structures, process areas, and locations of solid waste management units or other potential sources of contaminant migration from the routine and systematic releases of hazardous constituents to the environment (e.g., truck or railcar loading/unloading areas). The Permittee shall also include historical features that may be potential release areas because of past management practices. The Facility Profile shall include:

VIII.D.1.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.1.a(1) General geographic location;

VIII.D.1.a(2) Property lines with the owners of all adjacent property clearly indicated;

VIII.D.1.a(3) Facility structures, process areas and maintenance areas;

VIII.D.1.a(4) Any other potential release areas shall be delineated, such as railcar loading/unloading areas or any other AOI as described in RECAP Section 2.6; and

VIII.D.1.a(5) Locations of historical features that may be potential release areas or any areas of past solid and hazardous waste generation, treatment, storage or disposal activities.

VIII.D.1.b. The Facility Profile shall also include a description of ownership and operation of the facility.

VIII.D.1.c. The Permittee shall provide pertinent information for those spills that have not been assessed and reported to the Administrative Authority during facility investigations, addressed by facility spill contingency plans, or previously remediated or deemed for no further action. The information must include at minimum, approximate dates or periods of past waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, federal, or private party response units), including any inspection reports or technical reports generated as a result of the response.

VIII.D.2. Land Use and Exposure Profile

The Permittee shall include in the CSM a Land Use and Exposure Profile which includes surrounding land uses (industrial and non-industrial, as described in RECAP Sections 2.9.1 and 2.9.2), resource use locations (water supply wells, surface water intakes, etc.), beneficial resource determinations (groundwater classifications as described in RECAP Section 2.10), natural resources (wetlands, etc.), sensitive subpopulation types and locations (schools, hospitals, nursing homes, day care centers, etc.), applicable exposure scenarios, and applicable exposure pathways identifying the specific sources, releases, migration mechanisms, exposure media, exposure routes and receptors. The Land Use and Exposure Profile shall include:

VIII.D.2.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.2.a(1) Surrounding land uses, resource use locations, and natural resources/wetlands;

VIII.D.2.a(2) Locations of sensitive subpopulations; and

VIII.D.2.a(3) An exposure pathway flowchart which outlines sources, migration pathways, exposure media and potential receptors as depicted in Figure 8 (CMS example) of RECAP.

VIII.D.3. Physical Profile

The Permittee shall include in the CSM a Physical Profile which shall describe the factors that may affect releases, fate and transport, and receptors, including; topography, surface water features, geology, and hydrogeology. The Physical Profile shall include:

VIII.D.3.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.3.a(1) Topographic maps with a contour interval of five (5) or ten (10) feet, a scale of one inch to 100 feet (1:100), including hills, gradients, and surface vegetation or pavement;

VIII.D.3.a(2) Surface water features including routes of all drainage ditches, waterways, direction of flow, and how they migrate to other surface water bodies such as canals and lakes;

VIII.D.3.a(3) Regional geology including faulting and recharge areas, as well as local geology depicting surface features such as soil types, outcrops, faulting, and other surface features;

VIII.D.3.a(4) Subsurface geology including stratigraphy, continuity (locations of facies changes, if known), faulting and other characteristics;

VIII.D.3.a(5) Maps with hydrogeologic information identifying water-bearing zones, hydrologic parameters such as transmissivity, and conductivity. Also locations and thicknesses of aquitards or impermeable strata; and

VIII.D.3.a(6) Locations of soil borings and production and groundwater monitoring wells, including well log information, and construction of cross-sections which correlate substrata. Wells shall be clearly labeled with ground and top of casing elevations (can be applied as an attachment).

VIII.D.4. Release Profile

The Permittee shall include in the CSM a Release Profile which shall describe the known extent of contaminants in the environment, including sources, contaminants of concern (COC), areas of investigations, distribution and magnitude of known COCs with corresponding sampling locations, and results of fate and transport modeling depicting potential future extent/magnitude of COCs. The Release Profile shall include:

VIII.D.4.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V. Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.4.a(1) Estimations of source concentrations, exposure concentrations and compliance concentrations for each affected media as defined in Section 2.8 of RECAP;

VIII.D.4.a(2) Isopleth maps depicting lateral extent and concentrations of COCs;

VIII.D.4.a(3) Results of fate and transport modeling showing potential exposure concentrations and locations; and

VIII.D.4.a(4) Locations of potential sources including past or present waste units or disposal areas and all SWMUs/AOCs.

VIII.D.4.b. Table(s) depicting the following information for each SWMU/AOC, including but not limited to: location; type of unit/disposal/release area; design features; operating practices (past and present); period of operation; age of unit/disposal/release area; general physical condition; and method of closure.

VIII.D.4.c. Table(s) depicting the following waste/contaminant characteristics for those areas referenced in Condition VIII.D.4.b, including but not limited to: type of waste placed in the unit (hazardous classification, quantity, chemical composition), physical and chemical characteristics (physical form, description, temperature, pH, general chemical class, molecular weight, density, boiling point, viscosity, solubility in water, solubility in solvents, cohesiveness, vapor pressure); and migration and dispersal characteristics of

the waste (sorption coefficients, biodegradability, photodegradation rates, hydrolysis rates, chemical transformations).

VIII.D.5. Ecological Profile

The Permittee shall include in the CSM an Ecological Profile that shall describe the physical relationship between the developed and undeveloped portions of the facility, the use and level of disturbance of the undeveloped property, and the type of ecological receptors present in relation to completed exposure pathways. When compiling data for the Ecological Profile, current, as well as, future impacts to receptors and/or their habitats shall be considered. The Ecological Profile shall include:

VIII.D.5.a. A history and description of the developed property on the facility, including structures, process areas, waste management units, and property boundaries;

VIII.D.5.b. A history and description of the undeveloped property, including habitat type (wetland, grassy area, forest, ponds, etc.). Include a description of the primary use, degree and nature of any disturbance, along with proximity to drainage ditches, waterways and landfill areas;

VIII.D.5.c. A description of the site receptors in relation to habitat type, including endangered or protected species, mammals, birds, fish, etc.;

VIII.D.5.d. A description of the relationship between release areas and habitat areas, specifically relating chemicals of potential ecological concern (COEC) to ecological receptors;

VIII.D.5.e. An ecological checklist as described in Section 7.0 of RECAP. An ecological checklist (presented in Appendix C, Form 18 of RECAP) shall be used to determine if a tier 1 (screening level) Ecological Risk Assessment (ERA) is warranted.

VIII.D.6. Risk Management Profile

The Permittee shall include in the CSM a Risk Management Profile that shall describe how each AOI at the facility will be managed for the protection of human health and the environment. The Risk Management Profile will serve as documentation of the results of the site ranking system (described in Section 2.2 of RECAP). The Risk Management Profile will also document the criteria and verify that the SO, MO-1, MO-2 or MO-3 is appropriate for application at each AOI. The Risk Management Profile shall include:

VIII.D.6.a. A table for tracking the management options for each AOI, and the determination made, whether an AOI is deemed for no further action at

this time (NFA-ATT) or is going to use either the SO, MO-1, MO-2 or MO-3 management option.

VIII.D.6.b. A list of identified site-wide data gaps for further investigation.

VIII.D.6.c. Documentation of all interim measures which have been or are being undertaken at the facility, including under State or Federal compliance orders, other than those specified in the Permit. This documentation shall include the objectives of the interim measures and how the measure is mitigating a potential threat to human health or the environment and/or is consistent with and integrated into requirements for a long term remedial solution.

VIII.E. INTERIM MEASURES

VIII.E.1. If at any time during the term of this Permit, the Administrative Authority determines that a release or potential release of hazardous constituents from a SWMU/AOC poses a threat to human health and the environment, the Administrative Authority may require interim measures. The Administrative Authority shall determine the specific measure(s) or require the Permittee to propose a measure(s). The interim measure(s) may include a permit modification, a schedule for implementation, and an Interim Measures Workplan. The Administrative Authority may modify this Permit according to LAC 33:V.321 to incorporate interim measures into the Permit. However, depending upon the nature of the interim measures, a permit modification may not be required.

VIII.E.2. The Permittee may propose interim measures at any time by submittal of an Interim Measures Workplan subject to the approval of the Administrative Authority.

VIII.E.3. The Administrative Authority shall notify the Permittee in writing of the requirement to perform interim measures and may require the submittal of an Interim Measures Workplan. The following factors will be considered by the Administrative Authority in determining the need for interim measures and the need for permit modification:

VIII.E.3.a. Time required to develop and implement a final remedy;

VIII.E.3.b. Actual and potential exposure to human and environmental receptors;

VIII.E.3.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;

VIII.E.3.d. The potential for further degradation of the medium in the absence of interim measures;

VIII.E.3.e. Presence of hazardous wastes in containers that may pose a threat of release;

VIII.E.3.f. Presence and concentration of hazardous waste including hazardous constituents in soil that has the potential to migrate to ground water or surface water;

VIII.E.3.g. Weather conditions that may affect the current levels of contamination;

VIII.E.3.h. Risks of fire, explosion, or accident; and

VIII.E.3.i. Other situations that may pose threats to human health and the environment.

VIII.E.5. Upon approval of the Interim Measures Workplan and completion of the interim measure(s) implementation, the Permittee will submit a report to the Administrative Authority describing the completed work.

VIII.E.6. At anytime during or after the interim measure(s), including the issuance of an NFA-ATT, the Administrative Authority may require the Permittee to submit the SWMUs/AOCs for further corrective action.

VIII.F. CAS (CORRECTIVE ACTION STRATEGY) INVESTIGATION WORKPLAN

VIII.F.1. The CAS Investigation Workplan that describes site investigation activities for corrective action shall be submitted to the Administrative Authority within 180 days after the scoping meeting between the Permittee and the Administrative Authority. The CAS Investigation Workplan must address releases of hazardous waste or hazardous constituents to all media, unless otherwise indicated, for those SWMUs/AOCs listed in Appendix 1, Table 1. The focus of the site investigation phase for corrective action is to collect data to fill in data gaps identified in the CSM. The corrective action investigations may be conducted in phases if warranted by site conditions, contingent upon approval by the Administrative Authority.

VIII.F.1.a. The CAS Investigation Workplan shall describe the management options (MO) for each AOL/release area, data quality objectives for achieving each management option, and proposals for release characterizations (sampling and analysis/quality assurance plans) to support the data quality objectives (DQOs). (DQOs are determined based on the end use of the data to be collected, and the DQO development process should be integrated into project planning and refined throughout the CAS implementation. DQOs shall be used to 1) ensure that environmental data are scientifically valid, defensible, and of an appropriate level of quality given the intended use, and 2) expedite site investigations. The CAS Investigation Workplan is required to have DQOs that are developed to support the performance standard for each

release.) The CAS Investigation Workplan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the site investigations. The scope of work for the site investigation can be found in RECAP Appendix B.

VIII.F.1.b. The CAS Investigation Workplan shall describe sampling, data collection quality assurance, data management procedures (including formats for documenting and tracking data and other results of investigations) and health and safety procedures.

VIII.F.1.c. Development of the CAS Investigation Workplan and reporting of data shall be consistent with the latest version of the following EPA and State guidance documents or the equivalent thereof:

VIII.F.1.c(1) Guidance for the Data Quality Assessment, Practical Methods for Data Analysis. QA97 Version EPA QA/G-9. January 1998;

VIII.F.1.c(2) Guidance for the Data Quality Objectives Process. EPA QA/G-4. September 1994;

VIII.F.1.c(3) Data Quality Objectives Remedial Response Activities. EPA/540/G87-003. March 1987;

VIII.F.1.c(4) Guidance on Quality Assurance Project Plans. EPA QA/G-5. February 1998;

VIII.F.1.c(5) Interim EPA Data Requirements for Quality Assurance Project Plans. EPA Region 6, Office of Quality Assurance. May 1994;

VIII.F.1.c(6) 29 CFR 1910.120 (b) for the elements to Health and Safety plans;

VIII.F.1.c(7) RCRA Groundwater Monitoring: Draft Technical Guidance EPA/530-R-93-001 November 1992;

VIII.F.1.c(8) Test Methods for Evaluating Solid Waste, Physical/Chemical Methods; SW-846, 3rd Edition. November 1992, with revisions;

VIII.F.1.c(9) The LDEQ Handbook - Construction of Geotechnical Boreholes and Groundwater Monitoring Systems," prepared by the LDEQ and the Louisiana Department of Transportation and Development. This document is printed by and available from the Louisiana Department of Transportation and Development, Water

Resources Section, P. O. Box 94245, Baton Rouge, Louisiana 70804-9245; and

VIII.F.1.c(10) The LAC 33:I.Chapter 13 and Louisiana Department of Environmental Quality Risk Evaluation/Corrective Action Program (RECAP).

VIII.F.2. After the Permittee submits the CAS Investigation Workplan; the Administrative Authority will approve, disapprove, or otherwise modify the CAS Investigation Workplan in writing. All approved workplans become enforceable components of this Permit.

In event of disapproval (in whole or in part) of the workplan, the Administrative Authority shall specify deficiencies in writing. The Permittee shall modify the CAS Investigation Workplan to correct these within the time frame specified in the notification of disapproval by the Administrative Authority. The modified workplan shall be submitted in writing to the Administrative Authority for review. Should the Permittee take exception to all or part of the disapproval, the Permittee shall submit a written statement of the ground for the exception within fourteen (14) days of receipt of the disapproval.

VIII.F.3. The Administrative Authority shall review for approval, as part of the CAS Investigation Workplan or as a new workplan, any plans developed pursuant to Condition VIII.L addressing further investigations of newly-identified SWMUs/AOCs, or Condition VIII.M addressing new releases from previously-identified SWMUs/AOCs.

VIII.G. IMPLEMENTATION OF SITE INVESTIGATION ACTIVITIES UNDER CAS

No later than fourteen (14) days after the Permittee has received written approval from the Administrative Authority for the CAS Investigation Workplan, the Permittee shall implement the site investigation activities according to the schedules and in accordance with the approved CAS Investigation Workplan and the following:

VIII.G.1. The Permittee shall notify the Administrative Authority at least 10 working days prior to any field sampling, field-testing, or field monitoring activity required by this Permit to give LDEQ personnel the opportunity to observe investigation procedures and/or split samples.

VIII.G.2. Deviations from the approved CAS Investigation Workplan, which are necessary during implementation, must be approved by the Administrative Authority and fully documented and described in the progress reports (Condition VIII.C), RECAP Report (Condition VIII.H) and the final Risk Management Plan (Condition VIII.J).

VIII.H. RECAP REPORT

Within ninety (90) days after completion of the site investigation the Permittee shall submit a RECAP Report to the Administrative Authority for approval. The RECAP Report shall document the results of the site investigation activities, and the evaluation of the impacts from releases. The Administrative Authority will review and evaluate the report and provide the Permittee with written notification of the report's approval or a notice of deficiency. If the Administrative Authority determines the RECAP Report does not fully meet the objectives stated in the CAS Investigation Workplan (Permit Condition VIII.F), the Administrative Authority shall notify the Permittee in writing of the report's deficiencies, and specify a due date for submittal of a revised Final Report to the Administrative Authority.

VIII.H.1. The Permittee shall screen site-specific data using the appropriate RECAP standard (RS) for each AOI (depending on the MO), evaluate impacts from releases with exposure scenario evaluations, and update the Risk Management Profile of the CSM.

VIII.H.2. The report shall include, but not be limited to, the following:

VIII.H.2.a. Documentation of site investigation activities and results;

VIII.H.2.b. Evaluation of exposure scenarios to document impacts from releases;

VIII.H.2.c. Deviations from the CAS Investigation Workplan;

VIII.H.2.d. Results of screening activities using RECAP standards (RS), including SO, MO-1, MO-2, or MO-3 RS for each media;

VIII.H.2.e. The revised CSM with updated profiles which incorporate investigation and screening results; and

VIII.H.2.f. Proposed revisions to performance standards based on new information (e.g., change in land use, difference in expected receptors and/or exposure, or other differences in site conditions), if warranted.

VIII.I. REMEDIAL ALTERNATIVES STUDY

Upon completion and approval of the RECAP Report, the Permittee shall proceed with the evaluation of remedial alternatives to complete corrective action for each AOI according to the performance standards described in Condition VIII.A.2. The remedial alternatives shall be submitted to the Administrative Authority in the Remedial Alternatives Study (RAS) within ninety (90) days of the Administrative Authority's approval of the RECAP Report. In the Remedial Alternatives Study, the Permittee shall identify and evaluate various potential remedies that would meet the performance-based corrective action objectives and propose one or more specific remedies based on an evaluation of applicable data and available

corrective action technologies. The RAS shall be prepared in a manner that addresses the extent and nature of the contamination at the facility.

VIII.I.1. The Permittee shall evaluate remedies for each AOI that shall:

VIII.I.1.a. attain compliance with corrective action objectives for releases of hazardous waste and/or hazardous constituents, as established in the Conceptual Site Model or in later investigations approved by the Administrative Authority;

VIII.I.1.b. control sources of releases;

VIII.I.1.c. meet acceptable waste management requirements;

VIII.I.1.d. protect human health and the environment; and

VIII.I.1.e. meet applicable statutory and regulatory requirements (as noted in Condition VIII.A.2.b).

VIII.I.2. The Permittee shall evaluate the use of presumptive remedies and innovative technologies to achieve the appropriate remedial performance standards for each AOI.

VIII.I.3. The Permittee shall review the current interim measures/ stabilization activities to evaluate if these measures meet all the criteria for final remedy.

VIII.I.4. If under certain site-specific conditions, or when it is not technically or economically feasible to attain the corrective action objectives, the Permittee may propose to use institutional controls to supplement treatment or containment-based remedial actions upon approval of the Administrative Authority (Section 2.15 of RECAP).

VIII.I.5. The RAS shall at a minimum include:

VIII.I.5.a. An evaluation of the performance reliability, ease of implementation, and the potential impacts of the potential remedies;

VIII.I.5.b. An assessment of the effectiveness of potential remedies in achieving adequate control of sources and meeting remedial performance standards;

VIII.I.5.d. An assessment of the costs of implementation for potential remedies;

VIII.I.5.e. An assessment of the time required to begin and complete the remedy;

VIII.I.5.f. An explanation of the rationale for the remedy proposed for each AOI or group of AOIs; and

VIII.I.5.g. An assessment of institutional requirements (e.g., state permit requirements that may impact remedy implementation).

VIII.I.6. The Administrative Authority will review and evaluate the RAS and provide the Permittee with written notification of the study's approval or a notice of deficiency. If the Administrative Authority determines the RAS does not fully meet the requirements detailed in Conditions VIII.I.1 through VIII.I.5, the Administrative Authority shall notify the Permittee in writing of the RAS's deficiencies, and specify a due date for submittal of a revised RAS to the Administrative Authority. In addition, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

VIII.J. RISK MANAGEMENT PLAN

Within ninety (90) days of the Administrative Authority's approval of the RAS, the remedy/remedies proposed for selection shall be documented and submitted in the Risk Management Plan. The Permittee shall propose corrective action remedies in accordance with Chapter IV of the RCRA Corrective Action Plan (Final), May 1994, OSWER Directive 9902.3-2A or as directed by the Administrative Authority.

VIII.J.1. The Risk Management Plan shall at a minimum include:

VIII.J.1.a. A summary of the remedial alternatives for each AOI and the rationale used for remedy selection;

VIII.J.1.b. The final CSM with proposed remedies, including locations of AOIs addressed by a risk management activity, COC concentrations that represent the long-term fate and transport of residual COCs and the exposure pathways affected by the risk management activity;

VIII.J.1.c. Cost estimates and implementation schedules for proposed final remedies;

VIII.J.1.d. Proposed remedy design and implementation precautions, including special technical problems, additional engineering data required, permits and regulatory requirements, property access, easements and right-of-way requirements, special health and safety requirements, and community relations activities;

VIII.J.1.e. Remedy performance criteria and monitoring:

The Permittee shall identify specific criteria (such as land use changes, fate and transport model verification and constructed remedy performance) that will be evaluated to demonstrate that the risk management activity

implemented will remain protective. A schedule for periodic performance review (such as monitoring data summaries, including graphical and statistical analyses) shall be established to demonstrate that the implemented activities are consistently achieving and maintaining desired results. Further, a mechanism shall be established to re-evaluate risk management activities in the event the implemented action does not achieve and maintain the performance standards;

VIII.J.1.f. Contingency plans; and

VIII.J.1.g. Description and schedules for performance reviews.

VIII.J.2. After the Permittee submits the Risk Management Plan, the Administrative Authority will review and evaluate the plan and subsequently either inform the Permittee in writing that the plan is acceptable for public review or issue a notice of deficiency.

VIII.J.3. If the Administrative Authority determines the Risk Management Plan does not fully meet the remedial objectives, the Administrative Authority shall notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revised Final Risk Management Plan. In addition, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

VIII.J.4. After the Administrative Authority has determined the Risk Management Plan is acceptable for public review, the Administrative Authority shall inform the Permittee in writing and instruct the Permittee to submit the plan as a Class 3 permit modification request in accordance with the requirements of LAC 33:V.321.C.3.

VIII.J.5. After conclusion of a 60-day comment period, the Administrative Authority will either grant or deny the Class 3 permit modification request. In addition the Administrative Authority must consider and respond to all significant comments received during the 60-day comment period.

VIII.J.6. If the Class 3 Modification request is granted, the Administrative Authority shall prepare a draft permit incorporating the proposed changes in accordance with LAC 33:V.703.C and solicit public comment on the draft permit modification according to Condition VIII.N.3 of this permit.

VIII.J.7. If, after considering all public comments, the Administrative Authority determines that the Risk Management Plan is adequate and complete, the Administrative Authority will issue a public notice for final approval the Class 3 permit modification. The resultant modified permit will include schedules for remedy implementation as well as financial assurance provisions as required by Condition VIII.A.5 of this permit.

VIII.K. DETERMINATION OF NO FURTHER ACTION

VIII.K.1. NFA-ATT DETERMINATIONS FOR SPECIFIC SWMUs/AOCs

VIII.K.1.a. Based on the results of the site investigations, screening, risk evaluations and risk management activities, the Permittee may request a NFA-ATT determination for a specific SWMU/AOC by submittal of a Class 1¹ permit modification (¹ requiring Administrative Authority approval) request under LAC 33:V.321.C.1. The NFA-ATT request must contain information demonstrating that there are no releases of hazardous constituents from a particular SWMU/AOC that pose a threat to human health and/or the environment.

The basis for the determination of NFA-ATT shall follow the guidelines as described in the RECAP (Section 1.2.1 of RECAP) for each AOI, depending on the MO used.

VIII.K.1.b. If, based upon review of the Permittee's request for a permit modification, the results of the site investigations, and other information the Administrative Authority determines that releases or suspected releases from an individual SWMU/AOC which were investigated either are non-existent or do not pose a threat to human health and/or the environment, the Administrative Authority may grant the requested modification.

VIII.K.1.c. In accordance with LAC 33:V.321.C.1.a.ii, the Permittee must notify the facility mailing list within ninety (90) days of the Administrative Authority's approval of the Class 1¹ permit modification (¹ requiring Administrative Authority approval) request.

VIII.K.2. FACILITY-WIDE NFA-ATT DETERMINATION

VIII.K.2.a. Upon the completion of all activities specified in the Risk Management Plan and after all SWMUs and AOCs at the facility have been remediated according to the standards dictated by the selected RECAP MO, the Permittee shall submit a summary report supporting a determination of NFA-ATT on a facility-wide basis.

VIII.K.2.b. The summary report must include a historical narrative for each SWMU/AOC at the site that includes a summary of the investigation, sampling & analysis, remedial, and confirmatory sampling activities leading to the NFA-ATT request. The basis for the determination of NFA-ATT shall follow the guidelines as described in the RECAP (Section 1.2.1 of RECAP) for each AOI, depending on the MO used. The facility-wide NFA-ATT determination must consider any newly-identified SWMUs/AOCs discovered after submittal of the Risk Management Plan.

VIII.K.2.c. The Administrative Authority will review and evaluate the summary report and subsequently either inform the Permittee in writing that the report is acceptable for public review or issue a notice of deficiency.

VIII.K.2.d. If the Administrative Authority determines the summary report does not fully demonstrate that all remedial objectives have been satisfied, the Administrative Authority shall notify the Permittee in writing of the summary report's deficiencies and specify a due date for submittal of a revised summary report.

VIII.K.2.e. After the Administrative Authority has determined the facility-wide NFA-ATT summary report is acceptable for public review, the Administrative Authority shall inform the Permittee in writing and instruct the Permittee to submit the summary report as a Class 3 permit modification request in accordance with the requirements of LAC 33:V.321.C.3.

VIII.K.2.f. After conclusion of a sixty (60)-day comment period, the Administrative Authority will either grant or deny the Class 3 permit modification request. In addition the Administrative Authority must consider and respond to all significant comments received during the sixty (60)-day comment period.

VIII.K.2.g. If, based upon review of the Permittee's Class 3 permit modification request, the results of the site investigations, confirmatory sampling, and other pertinent information, the Administrative Authority determines that all SWMUs and AOCs have been remediated to the selected MO and no further action at the facility is warranted, the Administrative Authority will grant the modification request.

VIII.K.2.h. If the Class 3 Modification request is granted, the Administrative Authority shall prepare a draft permit incorporating the proposed changes in accordance with LAC 33:V.703.C and solicit public comment on the draft permit modification according to Condition VIII.N.4 of this permit.

VIII.K.2.i. If, after considering all public comments, the Administrative Authority determines that all activities specified in the Risk Management Plan have been completed and that all SWMUs and AOCs have been remediated to the selected MO, the Class 3 permit modification for facility-wide NFA-ATT will receive final approval. The CAS permit conditions will remain a part of the modified permit in the event that the remedial actions taken fail to maintain the established performance standard and to address any SWMUs/AOCs discovered at a later date.

VIII.K.3. CONTINUED MONITORING

If necessary to protect human health and/or the environment, a determination of NFA-ATT shall not preclude the Administrative Authority from requiring continued monitoring of air, soil, groundwater, or surface water, when site-specific circumstances indicate that releases of hazardous waste or hazardous constituents are likely to occur.

VIII.K.4. ADDITIONAL INVESTIGATIONS

A determination of NFA-ATT shall not preclude the Administrative Authority from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU/AOC at the facility that is likely to pose a threat to human health and/or the environment. In such a case, the Administrative Authority shall initiate a modification to the Permit according to LAC 33:V.321.

VIII.L. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY-IDENTIFIED SWMUs AND POTENTIAL AOCs

VIII.L.1. The Permittee shall notify the Administrative Authority, in writing, of any newly-identified SWMUs and potential AOCs (i.e., a unit or area not specifically identified during previous corrective action assessments, RFA, etc.), discovered in the course of ground water monitoring, field investigations, environmental audits, or other means, no later than thirty (30) days after discovery. The Permittee shall also notify the Administrative Authority of any newly-constructed land-based SWMUs (including but not limited to, surface impoundments, waste piles, landfills, land treatment units) and newly-constructed SWMUs where any release of hazardous constituents may be difficult to identify (e.g., underground storage tanks) no later than thirty (30) days after construction. The notification shall include the following items, to the extent available:

VIII.L.1.a. The location of the newly-identified SWMU or potential AOC on the topographic map required under LAC 33:V.517.B. Indicate all existing units (in relation to other SWMUs/AOCs);

VIII.L.1.b. The type and function of the unit;

VIII.L.1.c. The general dimensions, capacities, and structural description of the unit (supply any available drawings);

VIII.L.1.d. The period during which the unit was operated;

VIII.L.1.e. The specifics, to the extent available, on all wastes that have been or are being managed at the SWMU or potential AOC; and

VIII.L.1.f. Results of any sampling and analysis required for the purpose of determining whether releases of hazardous waste including hazardous constituents have occurred, are occurring, or are likely to occur from the SWMU/AOC.

VIII.L.2. Based on the information provided in the notification, the Administrative Authority will determine whether or not the area is a newly-identified SWMU or AOC. If the area is determined to be a newly-identified SWMU or AOC, the Administrative Authority will inform the Permittee in writing and request that the Permittee submit a Class 1¹ permit modification request under LAC 33:V.321.C.1 to add the newly-identified SWMU/AOC to Appendix 1, Table 2 of this permit.

Further, the Administrative Authority will determine the need for further investigations or corrective measures at any newly identified SWMU or AOC. If the Administrative Authority determines that such investigations are needed, the Administrative Authority may require the Permittee to prepare a plan for such investigations. The plan for investigation of SWMU or AOC will be reviewed for approval as part of the current CAS Investigation Workplan or a new CAS Investigation Workplan. The results of the investigation of any newly-discovered SWMU/AOC shall be incorporated into the CSM.

VIII.M. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT A SWMU OR AOC

The Permittee shall notify the Administrative Authority of any release(s) from a SWMU or AOC of hazardous waste or hazardous constituents discovered during the course of ground water monitoring, field investigation, environmental auditing, or other means. The notification must be in accordance with the procedures specified in Conditions II.E.16 through II.E.20 of this permit and based upon the nature, extent, and severity of the release. Such newly-discovered releases may be from newly-identified SWMUs or AOCs, newly-constructed SWMUs, or from SWMUs or AOCs for which, based on the findings of the CSM, completed RECAP Report, or investigation of an AOC, the Administrative Authority had previously determined no further investigation was necessary. The notification shall include information concerning actual and/or potential impacts beyond the facility boundary and on human health and the environment, if available at the time of the notification.

The Administrative Authority may require further investigation and/or interim measures for the newly-identified release(s), and may require the Permittee to prepare a plan for the investigation and/or interim measure. The plan will be reviewed for approval as part of the CAS Investigation Workplan or a new CAS Investigation Workplan. The Permit will be modified to incorporate the investigation, according to the Class 1¹ permit modification procedures under LAC 33:V.321. The results of the investigation of any newly-identified release(s) shall be incorporated into the CSM.

VIII.N. PUBLIC PARTICIPATION REQUIREMENTS

Public participation is an essential element in the implementation of any corrective action program at the facility. The CAS promotes the early and continued involvement of stakeholders in site remediation activity during permit issuance, renewal, or modification. The public is invited to review and comment on the corrective action requirements contained in any draft permitting decisions or draft permit modification documents and the associated plans and reports submitted by the Permittee. The Administrative Authority reserves the right to require more extensive public participation requirements based upon site-specific conditions and other relevant factors (e.g., compliance history, potential offsite impact, community interest, etc.). At a minimum, the public participation requirements shall include the following.

VIII.N.1. NFA-ATT Determinations for Specific SWMUs/AOCs

Based on the results of the site investigations, screening, risk evaluations and risk management activities, the Permittee may request a NFA-ATT determination for a specific SWMU/AOC by submittal of a Class 1¹ permit modification request under LAC 33:V.321.C.1. The Permittee must notify the facility mailing list within ninety (90) days of the Administrative Authority's approval of the Class 1¹ permit modification request, in accordance with LAC 33:V.321.C.1.a.ii and Condition VIII.K.1.c of this permit.

VIII.N.2. Draft Permitting Decision

The public may review and comment on the terms and conditions of the CAS during the public notice and comment period of the draft permitting decision. The Administrative Authority shall issue public notice upon preparation of the draft permitting decision in accordance with LAC 33:V.715. During the forty-five (45) day public comment period, the Administrative Authority will accept public comments on the draft permitting decision. At the end of the public comment period, the Administrative Authority will consider and address all public comments and make any necessary revisions to the draft permitting decision. After addressing all public comments, the Administrative Authority will issue a public notice for issuance of the final permitting decision. The final permitting decision will include a "Responsiveness Summary" detailing all comments received on the draft permitting decision and the actions taken (if necessary) to correct the draft before issuance of the final permitting decision.

VIII.N.3. Final Remedy Selection

The public may review and comment on the terms and conditions of the Risk Management Plan as described in Conditions VIII.J.4 through VIII.J.7 of this permit. If after addressing all public comments the Administrative Authority determines that the Risk Management Plan is satisfactory, the Administrative Authority will prepare a draft permit modification document in accordance with LAC 33:V.703.C.

The draft permit modification document will include a "Basis of Decision". The "Basis of Decision" will identify the proposed remedy for corrective action at the site and the reasons for its selection, describe all other remedies that were considered, and solicit for public review and comments on the Risk Management Plan included in the draft permit modification document.

After addressing all public comments, the Administrative Authority will issue a public notice for issuance of the final permit modification. The final permit modification will include a "Responsiveness Summary" detailing all comments received on the draft permit modification and the actions taken (if necessary) to correct the draft before issuance of the final permit modification.

VIII.N.4. Facility-Wide NFA-ATT

Upon the completion of all activities specified in the Risk Management Plan and after all facility remedial objectives have been met, the Permittee may submit a summary report for a determination of NFA-ATT on a facility-wide basis in accordance with Condition VIII.K.2 of this permit. The public may review and comment on the summary report as described in Condition VIII.K.2.b. If after addressing all public comments the Administrative Authority determines that all SWMUs and AOCs have been remediated to the selected MO and no further action at the facility is warranted, the Administrative Authority will prepare a draft permit modification document in accordance with LAC 33:V.703.C.

The draft permit modification document will include a "Basis of Decision". The "Basis of Decision" will provide a summary detailing contamination sources, site investigations, the MO selected for the facility, facility remedial standards, remedial actions, and sampling results demonstrating that the facility remedial standards have been achieved.

After addressing all public comments, the Administrative Authority will issue a public notice for issuance of the final permit modification. The final permit modification will include a "Responsiveness Summary" detailing all comments received on the draft permit modification and the actions taken (if necessary) to correct the draft before issuance of the final permit modification.

Table 1: Corrective Action Strategy Notification and Reporting Requirements

Below is a summary of the major notifications and reports that may be required by the Administrative Authority under the Corrective Action Strategy of this Permit in the event of releases requiring RCRA corrective action. The Administrative Authority will notify the Permittee of the notification and reporting requirements during the scoping meeting or another applicable stage of the corrective action process.

| <u>Actions</u> | <u>Due Date</u> |
|---|---|
| Submit Notice of Intent to request use of the CAS to the Administrative Authority for review and comment (Condition VIII.B.1) | Within sixty (60) days of the effective date of this permit (if facility corrective action is required) |
| CAS Scoping Meeting held between facility and Administrative Authority (Condition VIII.B.2) | Within sixty (60) days of submittal of the Notice of Intent |
| Submit Progress Reports on all activities to the Administrative Authority (Condition VIII.C.1) | Schedule to be determined by the Administrative Authority on a case-by-case basis |
| Make available other reports relating to corrective action to the Administrative Authority (Condition VIII.C.2) | Upon request of the Administrative Authority |
| Provide briefings to the Administrative Authority (Condition VIII.C.3) | As necessary and upon request by the Administrative Authority |
| Submit Conceptual Site Model (CSM) (Condition VIII.D) and facility Performance Standards (Condition VIII.A.2) to the Administrative Authority | Within one-hundred and twenty (120) days after the scoping meeting |
| Perform Interim Measures (Condition VIII.E) | As determined by the Administrative Authority on a case by case basis |
| Submit Corrective Action Strategy (CAS) Workplan for the facility investigation to the Administrative Authority (Condition VIII.F) | Within one-hundred and eighty (180) days after the CAS Scoping Meeting |

| | |
|--|---|
| Implement site investigation activities under CAS Investigation Workplan according to approved schedule (Condition VIII.G) | Within fourteen (14) days of receipt of approval by the Administrative Authority |
| Submit RECAP Report to the Administrative Authority (Condition VIII.H) | Within ninety (90) days of completion of the site investigation |
| Submittal of Remedial Alternatives Study (RAS) to the Administrative Authority (Condition VIII.I) | Within ninety (90) days of completion of approval of the RECAP Report by the Administrative Authority |
| Submit Risk Management Plan to the Administrative Authority (Condition VIII.J) | Within sixty (90) days of approval of the RAS by the Administrative Authority |
| Submit NFA (and Permit Modification) request to the Administrative Authority (Condition VIII.K) | As necessary |
| Notification of newly-identified SWMUs and potential AOCs (Condition VIII.L) | Thirty (30) days after discovery |
| Notification of newly-discovered releases (Condition VIII.M) | Fifteen (15) days after discovery |

APPENDIX 1

SUMMARY OF CORRECTIVE ACTION ACTIVITIES

The intent of Appendix 1 is to provide an overview of the history and current status of the SWMUs, AOCs, closure activities and/or corrective action activities at the site at the time of issuance of the final permit and may not necessarily provide a definitive regulatory determination for a particular SWMU or AOC. The classification of an individual SWMU or AOC is subject to change by the LDEQ based on future geological/hydrogeological conditions and future information available to the LDEQ.¹

IDENTIFICATION OF SWMUs, AOCs AND CORRECTIVE ACTION ACTIVITIES TO DATE

The United States Environmental Protection Agency (EPA) conducted a preliminary review and inspection and issued a RCRA Facility Assessment (RFA) in August 1987 that identified 26 SWMUs and 7 AOCs. The Geismar Facility conducted a waste analyses and release investigation on 17 SWMUs and 3 AOCs in late 1990 and early 1991 to address the items that were listed in the RFA. The goal of the preliminary investigation was to determine the medias affected, to characterize the waste and constituents in question, and to identify the releases to the environment. The findings were reported to EPA in a report dated April 17, 1991. A RCRA Facility Investigation (RFI) work plan was submitted to EPA on July 18, 1991. EPA approved the RFI work plan and the preliminary report on September 25, 1991. Phase I of the RFI was conducted to determine whether a SWMU or AOC released hazardous waste constituents into the environment; and if they have released; what constituents of concern (COCs) were released. The RFI Phase I investigation took place between January and June 1992. LDEQ received the RFI Phase I report on December 3, 1992 and approved the Phase I interim report on March 30, 1998. After the Phase I report the number of SWMUs was reduced to 12 and the number of AOCs was reduced to 2. Two additional SWMUs were discovered following the completion of the Phase I RFI report, the Fire Pond Drum Area and EDC Storage Vessel, which were included in the Phase II RFI investigation. The Phase II RFI was conducted to further delineate the extent of the contamination. The Phase II RFI work plan was submitted to LDEQ in February 2001 and was approved November 2, 2006. The Phase II RFI work plan identified 12 SWMUs and two AOCs for investigation at the site that potentially contained soil and/or groundwater constituents that exceeded the applicable RECAP screening standards developed for each SWMU/AOC. The Phase II RFI work was conducted between December 2006 and January 2007. The Phase II RFI report was submitted to the LDEQ in August 2007. The 12 SWMUs and two AOCs investigated during the Phase II RFI are discussed below.

The Sulfur Recovery Unit (SRU): The SRU includes three SWMUs: SWMUs 5 (Flexzone Tar Truck Unloading Area), 11e (Flexzone Sump), and 16 (Toluene Tar Tank or Flexzone Tank). The original Flexzone sump and tank have been replaced and a secondary containment has been installed around the entire area. The areas are described below:

SWMU 5: The Flexzone Tar Truck Unloading Area is approximately 10 feet east of the Toluene Tar Tank in the northwest corner of the facility. The area is used to

offload toluene tar, which is transferred by truck from the process unit. The Flexzone Tar Tank Unloading Area has been in operation since 1975.

SWMU 11e: The Flexzone Sump is located between the Toluene Tar Tank Unloading Area and the Toluene Tar Tank. It was designed to collect excess tar from the Toluene Tar Tank. The sump was constructed below grade with concrete and was replaced in kind in 1988.

SWMU 16: The Toluene Tar Tank was a carbon steel tank used to store the Flexzone toluene tars prior to disposal off-site. The tank was originally constructed in 1974 and was replaced in kind in the late 1980's with Tank RV-10. Tank RV-10 has a capacity of 13,000 gallons, is constructed aboveground, and is horizontally oriented. The dimensions of the tank are approximately 9 feet in diameter and 27 feet in length. The tank is heated and maintained under a nitrogen blanket with back-pressure control system at 25 lbs per square inch (psi).

Soil and groundwater samples collected from these SWMUs within the SRU during the Phase II RFI did not exhibit constituent concentrations or sample quantitation limits (SQLs) in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a No Further Action-At This Time (NFA-ATT) determination is pending the LDEQ's review.

SWMU 10: The Monochem Landfill is located in Section 11-T10A-R2E, southwest of the facility and within 300 feet of the Mississippi River levee. The Monochem Landfill occupies approximately 9 acres and has a shallow groundwater monitoring network around its perimeter.

SWMU 11a: The Celogen OT Sump is an open top, below grade structure constructed of concrete and covered with a metal grate. The Celogen OT Sump is a part of the Celogen OT Unit process wastewater collection system. The process wastewaters generated by the unit are aqueous and contain dissolved 1,2-dichloroethane (EDC). In the early 1990's, the initial RFI of SWMU 11a was conducted. The findings from the initial RFI prompted a supplemental assessment to delineate groundwater beneath the SWMU. A supplemental assessment was conducted in 1999. The investigations revealed that EDC concentrations were present in shallow soil and groundwater within a localized area beneath the Celogen OT Unit. Interim corrective actions conducted for the Celogen OT Sump SWMU involved a dual phase extraction pilot study on monitoring wells OT-1 and OT-6 (groundwater samples extracted from these wells contained the highest dissolved EDC concentrations) to determine the effectiveness of simultaneously mitigating the unsaturated zone and the shallow water bearing zone (Zone III). This extraction procedure was conducted once a month from September 2006 until March 2007 for approximately 8 hours each event. Analyses of groundwater samples collected from six monitoring wells installed in the Celogen OT Unit (wells OT-1 through OT-6) indicated a reduction in the dissolved EDC concentrations in four of the six wells (perimeter wells OT-2 through OT-5). EDC concentrations fluctuated throughout the duration of the pilot study, implying that dissolved EDC from areas surrounding the wells was being recovered by the wells. The Geismar Facility is exploring

various options, including an extended trial dual phase extraction program to further mitigate EDC concentrations in soil and groundwater at the Celogen OT Unit.

SWMU 11b: The BHT/B9 Sump is a concrete sump which is partially below grade, with lateral dimensions of approximately 18 feet by 11 feet; a narrow metal grate is the only opening of the surface. The sump is part of the process wastewater collection system for the BHT process unit. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU 11c: The Flexzone Pond is inactive (closed in 2003). The Flexzone pond was a below-grade concrete sump approximately 9 feet deep, with lateral dimensions of 40 feet by 50 feet. In the spring of 2003, the pond was cleaned by removing approximately 587,558 pounds of material. The empty structure was partially filled with a fluid material (a concrete mixture).

During a subsurface assessment in close proximity to the closed former Flexzone Pond in 2004, a localized light non-aqueous phase liquid (LNAPL) was discovered on the exterior of the former Flexzone Pond near the southwest corner at a depth of approximately 7 feet below ground surface (bgs). Monitoring wells were installed during the January 2007 RFI to help define the extent of the COCs in the groundwater in the vicinity of the LNAPL. Analytical results confirmed that the LNAPL is isolated to an area immediately adjacent to the former Flexzone Sump.

SWMU 11d: The UDMH Sump is a below grade concrete sump with lateral dimensions of approximately 10 feet by 10 feet. The sump is used to temporarily store process water from the BHT production unit. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU 11f: The Neutralization Sump is a below-grade concrete sump, located toward the center of the Geismar Facility near the Flexzone Unit. The sump is part of the process wastewater collection system and is used to neutralize process water through the addition of either acid or caustic, as needed. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU 11g: The Thiazole Sump collects process wastewater from the Thiazole Unit. The sump is constructed and is set below grade, although the upper portions of the sump are above grade. Two temporary monitoring wells at SWMU 11g yielded turbid borehole water samples which, when analyzed, had concentrations of dibenz(a,h)anthracene that exceeded the limiting RECAP standard. Two new monitoring wells with pre-packed screens were installed in January/February 2008. Samples collected from these 2 new monitoring wells reported constituent concentrations below all applicable RECAP standards. These results

were reported to the LDEQ in a February 2008 RECAP addendum. The Geismar Facility's request for a NFA-ATT determination for this SWMU is pending the LDEQ's review.

SWMU FP: The Fire Pond Drum Area was situated on the southern and western exterior of the Fire Pond. It contained buried drums and debris that were removed. Corrective action activities were completed in January 2007 through the removal and off-site disposal of approximately 5,500 cubic yards of material. Analyses of samples collected from the bottom and sides of the excavated area indicated that the corrective action effectively mitigated this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU EDC: The EDC Storage Vessel is a 12,000 gallon storage vessel that was put into service at the Geismar facility in 1981. The EDC Storage Vessel is constructed of steel, is cylindrical in shape, horizontally oriented above the ground on concrete "saddles" and is constructed within a concrete secondary containment system. The vessel is located in the western portion of the Geismar Facility.

A limited investigation of the EDC Storage Vessel was conducted in the late 1990's after an accidental overflow of rinse water from the vessel. The limited assessment indicated detectable concentration of EDC in shallow soil and borehole water samples collected from beneath the secondary containment area for the vessel. The Geismar Facility is exploring various options, including a trial dual phase extraction program similar to that employed at the Celogen OT Unit, to mitigate EDC concentrations at the EDC Storage Vessel.

AOC-A: Rail Spot 18 - The Geismar Facility's surface water runoff control system is designed to separate process area stormwater runoff from the general area (non-contact) stormwater runoff. AOC-A is a stormwater ditch. The ditch segment of interest is approximately 100 feet long and 20 feet wide. This ditch receives runoff from the Rail Spot Unloading Area, the vacant area north of the Rail Spot and the occasional overflow runoff from the Flexzone Tank Farm area during periods of heavy rain. Soil and groundwater samples collected from this AOC during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this AOC. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

AOC-D: Process Area Stormwater Drainage System (Chemical Process Area) - The stormwater drainage system within the chemical process areas of the Geismar Facility is designed to transport contact stormwater from the process area. Soil and groundwater samples collected from the AOC during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this AOC. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

Two new SWMUs, the Sulfur Washout Basin (SWB) and the High-Boiling Tar Drumming Area Sump (HBT), were discovered in November 2007 after the Phase II RFI was completed.

SWMU SWB (Sulfur Washout Basin): The SWB was in the Thiazoles Unit and received washout from pumps that contained sulfur and residual carbon disulfide.

SWMU HBT (High-Boiling Tar Drumming Area Sump): The HBT was located in the Thiazoles Unit of the Geismar Facility and collected stormwater runoff and washdowns from an area that was used to drum high-boiling tar wastes.

The two SWMUs were excavated and the surrounding soil was removed. Surface investigation for SWMUs SWB and HBT took place in January 2008 and was consistent with the 2003 RECAP and the work plan approved by LDEQ in November 2006. Soil and borehole water samples collected from these two new SWMUs did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for these SWMUs. The results of the investigation were submitted to the LDEQ in a March 2008 RFI Addendum. The Geismar Facility's request for a NFA-ATT for the SWB and HBT SWMUs is pending the LDEQ's review.

All of the information regarding SWMU 5, SWMU 11e, SWMU 16, SWMU 10, SWMU 11a, SWMU 11b, SWMU 11c, SWMU 11d, SWMU 11f, SWMU 11g, SWMU FP, SWMU EDC, AOC A, and AOC D was taken from the August 2007 RFI/RECAP report. The information regarding SWMU SWB and SWMU HBT was taken from the March 13, 2008 RFI/RECAP Addendum. The Geismar Facility is currently awaiting approval of the August 2007 RFI Phase II report and the RFI Addenda reports submitted in February and March 2008.

A new SWMU, the Deepwell Tank Farm Sump (DTF), and a new AOC, the Former Bay Minette Acid Tank (BMAT), were discovered and identified by the Geismar Facility in May 2008. The Deepwell Tank Farm was located within an earthen berm and drained to a 4 x4x4 foot concrete sump, which was the collection point for any spills of non-hazardous wastewater that historically may have originated from the deepwell tanks. The Former Bay Minette Acid Tank was used in the Facility's wastewater treatment system for neutralization.

Upon completing WV-01 wastewater tank decommissioning, personnel at the Geismar Facility commenced the cleanout of the associated Deepwell Tank Farm Sump, at which time they discovered visual staining of soil surrounding the sump. An attempt was made to excavate the discolored soil, but visual signs of discoloration still remained.

In the process of removing the secondary containment around the Former Bay Minette Acid Tank, personnel at the Geismar Facility discovered discolored (yellow) soil below the removed containment. Personnel at the Geismar Facility attempted to remove the discolored area by excavating the first 3 feet of soil from an approximate 2,500 square foot area. It was determined that the excavation was not sufficient to remove all potentially impacted areas, and the project was terminated. Further investigation activities at the DTF and the BMAT were conducted the week of July 26, 2008 and results were pending at the time this permit was issued.

CLOSURE ACTIVITIES TO DATE

The following were identified in the Geismar Facility's hazardous waste permit application and were accorded interim status by the LDEQ and have recently been closed. The closures of these tanks and the former incinerator units were approved by the LDEQ in correspondence dated April 7, 2008, and the approval of the subsurface surrounding each is pending review, making each a SWMU.

Tank PV-42: As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PV-42 in January 2007. Tank PV-42 is located in the Thiazoles Area of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated five constituents in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or SQLs that exceed the soil RECAP Screening Option Screening Standards (SO SS) -- iron, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethionene, benzenethiol, and N-nitrosodimethylamine. These soil constituents were further evaluated under the RECAP MO-1 and/or MO-2. Only one constituent (benzenethiol) was detected in one shallow soil sample (0 to 2 feet bgs) at one of the soil boring locations at a concentration above the limiting RECAP standard developed for the area investigated around the tank. The tank and the area immediately surrounding the tank were inspected during the investigation activities. The tank's secondary containment system was intact and showed no evidence of leaks or spills from the tank. Based on the operational history of the tank (an aboveground tank placed on footings that elevate the bottom of the tank above the surrounding surface, used to store spent methanol, located within a concrete secondary containment with no evidence of leaks or spills from the tank), there is no evidence that the constituent benzenethiol is associated with the tank.

Analytical results from borehole water samples collected from the area of investigation indicated 20 constituents in select samples with concentrations or SQLs that exceeded the groundwater RECAP SO SS -- arsenic, barium, cadmium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolethione, 2(3H)-benzothiazolethionene, 4-bromophenyl phenyl ether, benzenethiol, benzo(a)pyrene, benzothiazole, bis(2ethylhexyl)phthalate, hexachlorobenzene, hexachlorobutadiene, methylenethiazole, N-nitrosodimethylamine, pentachlorophenol, and total difluorobenzene. These borehole water constituents were further evaluated under the RECAP MO-1 and/or MO-2, as applicable, and none exceeded these standards.

Tank PR-202: As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PR-202 in January 2007. Tank PR-202 is located in the Unsymmetrical Dimethylhydrazine (UDMH)/Butylated Hydroxytoluene (BHT) Area within the southwestern portion of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents (iron, benzenethiol, N-nitrosodimethylamine, and tert-butyl-4-methylphenol(t-BPC)) in select soil samples collected from the shallow soil (0-15 feet bgs) with concentrations or SQLs that

exceeded the limiting soil RECAP SO SS. These soil constituents were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standards.

Analytical results from borehole water samples collected from the area of investigation indicated 20 constituents in select samples- arsenic, barium, beryllium, cadmium, chromium, iron, lead, nickel, vanadium, zinc, 2(3H)-benzothiazolethione, benzenethiol, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, hexachlorobenzene, hexachlorobutadiene, N-nitrosodimethylamine, pentachlorophenol, tert-butyl-4methylphenol(t-BPC), and total difluorobenzene, with concentrations or SQLs above the RECAP SO SS. These constituents were further evaluated under RECAP MO-1, and none exceeded the MO-1 standard.

Tank RV-10: As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank RV-10 in November 2006 and January 2007. Tank RV-10 is located in the Sulfur Recovery Unit of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents in select soil samples collected from the shallow soil (0-15 feet bgs) with concentrations or SQLs that exceeded the limiting soil RECAP SO SS- iron, 2(3H)-benzothiazolethione, benzenethiol, and N-nitrosodiphenylamine. The soil constituents that exceeded the SO SS were further evaluated under the RECAP MO-1 and none exceeded the RECAP MO-1 standard.

Analytical results from borehole water samples collected from the area of investigation indicated fourteen constituents in select samples with concentration or SQLs above the RECAP SO SS- arsenic, barium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethione, benzenethiol, benzothiazole, methylbenzothiazole, N-nitrosodiphenylamine, pentachlorophenol and total difluorobenzene. The constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Former Incinerator: As part of the closure plan, a subsurface investigation was performed at the area surrounding the former incinerator in November 2006 and January 2007. The former incinerator was located in the Sulfur Recovery Unit of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or SQLs that exceeded the limiting soil RECAP SO SS- iron, 2(3H)-benzothiazolethione, benzenethiol, and N-nitrosodiphenylamine. The soil constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Analytical results from borehole water samples collected from the area of investigation indicated fourteen constituents in select samples with concentrations or SQLs that exceeded the limiting groundwater RECAP SO SS- arsenic, barium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethione, benzenethiol, benzothiazole, methylbenzothiazole, N-nitrosodiphenylamine, pentachlorophenol, and total difluorobenzene.

The constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Tank PV-525: As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PV-525 in January 2007. Borehole water from boring 3 indicated the presence of n-hexane, 2-methylnaphthalene, 4-nitroaniline and dibenz(a,h)anthracene above applicable RECAP screening standards. The Geismar Facility is in the process of identifying a path forward to address these constituent concentrations.

Drum Storage Pad: As part of the closure plan, a subsurface investigation was performed at the Drum Storage Pad. A closure certification has not yet been submitted to LDEQ.

TABLE 2. SUMMARY OF CORRECTIVE ACTION ACTIVITIES

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|-----------------------------|--|------------------------------|--|
| SWMU 5: Flexzone Tar Truck Unloading Area/Sulfur Recovery Unit (SRU) | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11e: Flexzone Sump/SRU | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 16: Toluene Tar Tank / SRU | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 10: Monochem Landfill | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11a: Celogen OT Sump/Celogen OT Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11b: BHT/B9 Sump/BHT Area | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11c: Flexzone Pond/Flexzone Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11d: UDMH Sump/UDMH Area | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11f: Neutralization Sump/Flexzone Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|-----------------------------|--|--------------------------|--|
| SWMU 11g: Thiazoles Sump/Thiazoles Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU FP: Fire Pond Drum Area | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU EDC: EDC Storage Vessel/ Celogen OT Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU SWB: Sulfur Washout Basin/Thiazoles Area | Soil/ Groundwater | Addendum to August 2007 RCRA RECAP/Phase II RFI submitted March 13, 2008 | TBD ¹ | 36769178 |
| SWMU HBT: High-Boiling Tar Drumming Area Sump/ Thiazoles Area | Soil/ Groundwater | Addendum to August 2007 RCRA RECAP/Phase II RFI submitted March 13, 2008 | TBD ¹ | 36769178 |
| SWMU DTF: Deepwell Tank Farm Sump/ Deepwell Tank Area | Soil/ Groundwater | Investigation Pending | TBD ¹ | |
| AOC BMAT: Former Bay Minette Acid Tank/ Flexzone Unit | Soil/ Groundwater | Investigation Pending | TBD ¹ | |
| AOC A: Rail Spot 18 | Soil/ Groundwater | RECAP/ Phase II RFI | TBD ¹ | Part 1 36259515; |

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|-----------------------------|--|------------------------------|--|
| | | Report submitted September 6, 2007 | | Part 2 36259615 |
| AOC D: Process Area Storm Water Drainage System | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| Tank PV-42/Thiazoles Area | Soil/ Groundwater | Closure Certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Tank RV-10/SRU | Soil/ Groundwater | Closure Certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Tank PR- 202/BHT/UDMH Area | Soil/ Groundwater | Closure Certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Former Incinerator/SRU | Soil/ Groundwater | Closure certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Tank PV-525/Trilene Area | Soil/ Groundwater | Closure certification/verification mailed May 6, 2008. | TBD ¹ | 36812094 |

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|--------------------------------|--|------------------------------|--|
| | | Further investigation pending. | | |
| Drum Storage Pad/Deepwell Tank Area | Information to be Completed | Awaiting submittal of closure certification/verification | TBD ¹ | |

¹"To be Determined"- Any need for corrective action will be determined subsequent to the completion of the CAS Investigation Work Plan (RFI Phase II) and the LDEQ's approval of the RECAP report and addenda.

ATTACHMENT 1

ATTACHMENT 1
LIST OF FACILITY DOCUMENTS INCORPORATED
IN THE PERMIT BY REFERENCE
LAD008194060
AI#1433

| DOCUMENT TYPE | APPLICATION/DOCUMENT DATE | ELECTRONIC DATABASE MANAGEMENT SYSTEM (EDMS) DOCUMENT ID | COMMENTS |
|---|---------------------------|--|--|
| Financial Assurance | May 8, 2008 | | |
| Post-Closure Cost Estimates | December 11, 2007 | 364685762 | Appendix B, Table 1; Response to NOD 2 |
| Post-Closure Plan ¹ | December 11, 2007 | 364685762 | Appendix B; Response to NOD 2 |
| Groundwater Monitoring Plan/Sampling Analysis Plan ¹ | December 11, 2007 | 364685762 | Appendix D; Response to NOD 2 |
| Contingency Plan | December 11, 2007 | 364685762 | Appendix C; Response to NOD 2 |
| Inspection Plan | July 26, 2000 | 10840849 | Volume IV, Appendix C, Attachment 4, Post-Closure Renewal Application |
| Security Plan | July 26, 2000 | 10840149 | Volume III, Appendix B Attachment 16; Post-Closure Renewal Application |
| Personal Training Plan | July 26, 2000 | 10840149 | Volume IV, Appendix C, Attachment 17; Post-Closure Renewal Application |

¹ Groundwater Sampling and Analysis Plan (SAP) and Post-Closure Plan submitted December 11, 2007 should be followed, except for the changes noted in Condition IV, Tables 2-4, until the new SAP and Post-Closure Plan required by II.E.25.a and II.E.25.c have been approved by the Administrative Authority.

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LION COPOLYMER GEISMAR, LLC
LAD008194060-PC-RN-1 AI # 1433/PER20000002

Item: 1

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of the Permit, Condition II.E.22, Other Non-Compliance

Comment: It is unclear what "other instances of noncompliance" are to be reported pursuant to this section. Please provide clarification/definition of "Other Noncompliance" instances.

LDEQ The Department acknowledges your comment and will provide clarification.

Response: Other non-compliance would be any non-compliance with the permit not listed in Conditions II.E.16 (Emergency Unauthorized Discharge Notification), II.E.17 (Non-Emergency Unauthorized Discharge Notification), II.E.18 (Unauthorized Discharge to Groundwater Notification), and II.E.20 (Noncompliance Reporting).

Action: The permit was not revised.

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Item: 2

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of the Permit; Condition II.E.25.a, Schedule of Compliance

Comment: According to the draft permit, an updated Groundwater Sampling and Analysis Plan (SAP) must be submitted within 60 days after the effective date of the permit. Because of Changes to the SAP, an updated Post-Closure Plan will likely be submitted to incorporate applicable changes to the SAP. Attachment 1 of the draft permit should be revised accordingly to include the same footnote as for the SAP.

LDEQ The Department acknowledges your comment and concurs.

Response:

Action: The permit was revised. (NOTE: Strikeout indicates deletion; underline indicates addition.)

Permit Condition II.E.25.c was added as follows:

II.E.25.c. Permittee must submit, within sixty (60) days after the effective date of the permit, an updated Post-Closure Plan, for approval that is consistent with the updated Sampling and Analysis Plan being submitted per Condition II.E.25.a of this permit.

Superscript "1" was inserted after "Post-Closure Plan" in the table in Attachment 1. Footnote ¹ of Attachment 1 was revised as follows:

¹ Groundwater Sampling and Analysis Plan (SAP) and Post-Closure Plan submitted December 11, 2007 should be followed, except for the changes noted in Condition IV, Tables 2-4, until the new SAP and Post-Closure Plan required by II.E.25.a and II.E.25.c have been approved by the Administrative Authority.

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Item: 3

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition II.E.25.b, Schedule of Compliance

Comment: This Condition requires the Permittee to submit a Notice of Intent to conduct corrective action using the Corrective Action Strategy (CAS) within 60 days after the effective date of the permit. It is unclear what corrective action the LDEQ is claiming the Permittee must undertake at this time and what corrective action is governed by this condition, or if this information is presented for informational purposes only, in the event these conditions are implicated in the future. In August 2007, the Geismar Facility submitted a Resource Conservation and Recovery (RCRA) Act Facility Investigation (RFI) and Risk Evaluation/Corrective Action (RECAP) Report to the Louisiana Department of Environmental Quality (LDEQ). In 2008, subsequent addenda to the RFI/RECAP report were submitted to the LDEQ. The RFI/RECAP report and addenda are pending review and approval by the LDEQ.

According to Table 2 of Appendix 1 of the draft permit, any need for corrective action is to be determined once the LDEQ completes its review of the Phase II RCRA Facility Investigation (RFI) Report dated August 2007 and addenda thereto submitted in February, March and August 2008, and the various closure certifications submitted, thus conflicting with the "within 60 days after the effective date of this permit" language of this Condition. This Condition should be modified to link any potential corrective actions to the LDEQ findings from its review of the RFI/RECAP report and addenda thereto.

LDEQ The Department acknowledges your comment but does not concur.
Response:

There is no conflict in the permit between Table 2 of Appendix 1 and Condition II.E.25.b of the Schedule of Compliance. As stated in Table 2 of Appendix 1, any need for corrective action (i.e., the term "corrective action" used in Appendix 1 refers to remedy implementation) is to be determined once the Department completes its review of the various reports submitted by the facility. Condition II.E.25.b of the Schedule of Compliance requires the facility to submit a Notice of Intent (NOI) to conduct corrective action according to the Corrective Action Strategy (CAS) within 60 days of the effective date of this permit. The purpose of this notice is for the facility to submit basic information describing how it will proceed through the entire

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CAS process (i.e., identification, assessment, investigation, evaluation, remedy selection and remedy implementation).

The CAS language is the new HSWA permit language that is now standard in all hazardous waste permits issued by the Department. The CAS is a more streamlined approach to corrective action than the traditional approach to RCRA corrective action included in the Permittee's previous permit. Further, the CAS is a facility-wide approach that focuses corrective action on releases that pose the greatest risk first. Releases are screened using numbers from the Department's RECAP to determine the priority of corrective action, and remedial alternatives are selected on the basis of their ability to achieve and maintain the established performance standards.

The CAS need not be applied to work that has already been completed to the satisfaction of the Administrative Authority. Although the traditional RCRA corrective action process and reports (i.e., RFIs, CMSs, CMIs, etc.) are not elements of the CAS, the use of information and reports from the traditional corrective action process, if available, is encouraged. Information that has been previously developed by the Permittee during the corrective action process (including but not limited to the RFI and RECAP Report and addenda prepared for the facility) may be referenced in future submittals.

Appendix 1 of this permit contains a summary of corrective action activities completed to date and shall be used to determine how current site-specific conditions translate into the CAS process at the time of issuance of this permit. Therefore, the applicability of various provisions of the CAS will depend on how current site-specific conditions translate into the CAS process as detailed in Appendix 1. As the facility has already completed the initial work through submittal of the RFI and RECAP Report for currently identified SWMUs/AOCs, the Department will ensure that the information presented in the facility's reports are utilized to the fullest extent possible.

Submitting a NOI does **not** mean that Lion must begin the corrective action process all over again. A scoping meeting will be held between the Department and Lion to determine how current site-specific conditions translate into the CAS process. Therefore, the NOI must be submitted in accordance with Condition VIII.B.1.

NOTE: Since corrective action includes identification, assessment, investigation, evaluation, remedy selection and remedy implementation, any newly-identified SWMUs/AOCs and releases would be subject to the CAS.

Action: The permit was not revised.

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HAZARDOUS WASTE POST-CLOSURE PERMIT
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Item: 4

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of the Permit, Condition VI.B, Required Programs

Comment: The draft permit requires that the Permittee conduct a Compliance Monitoring Program per Condition VI.I. Condition VI.C states that the "MO-1 concentration limits for each hazardous waste constituent specified in Condition VI, Table 3 shall serve as the groundwater protection standard." Condition VI.I requires that this program must continue until "1) compliance with the groundwater protection standard is achieved for at least 3 years (at that time, the Permittee must notify the Administrative Authority in writing, and upon approval submit a permit modification application to reestablish a Detection Monitoring Program)..." A review of groundwater monitoring data for the Geismar Facility shows that the constituent concentrations in the 10 groundwater monitoring wells listed in Condition VI, Table 2 (including the point of compliance wells) have not exceeded the RECAP MO-1 standards for over 3 years. Given this data, there is no basis for a Compliance Monitoring Program at the Geismar Facility. Therefore, all applicable portions of the permit should be revised to remove the requirement for a Compliance Monitoring Program and to replace this requirement with a Detection Monitoring Program. These sections would include, but are not limited to, Condition VI.A through L, including Tables 1 through 4. The Detection Monitoring Program requirements should be added to the permit.

LDEQ The Department acknowledges your comment and will provide clarification.

Response:

The third sentence under Condition VI.I states:

"The Permittee must continue or expand the Compliance Monitoring Program until one of the following occurs: 1) compliance with the groundwater protection standard is achieved for at least three (3) years (at that time, the Permittee must notify the Administrative Authority in writing, and upon approval submit a permit modification application to reestablish a Detection Monitoring Program; or 2) a Corrective Action Program is established with adequate monitoring as delineated in Condition VI.J and LAC 33:V.3321.D, and the permit is modified accordingly."

Number 1 in the referenced statement was an attempt to clarify the regulations and define the circumstances that end the compliance period.

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LAC 33:V.3313.A states that "The administrative authority will specify in the facility permit the compliance period during which the groundwater protection standard of LAC 33:V.3305 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period)." LAC 33:V.3313.B states that "The compliance period begins when the owner or operator initiates a Compliance Monitoring Program meeting the requirements of LAC 33:V.3319." In the preamble to the federal rule, (Federal Register/Vol. 47, No.143/Monday, July 26, 1982) the United States Environmental Protection Agency (EPA) indicates that a Detection Monitoring Program would be reinstated in the event the compliance period ends prior to the end of the post-closure care period.

Additional guidance published in EPA's RCRA Online (www.epa.gov/rcraonline/index.htm, RCRA Online # 12504, 12/01/1985) states that "Upon conclusion of the compliance period, the owner/operator may be able to return to detection monitoring for any remaining period of post-closure care, provided that: (1) no corrective action is required (40 CFR 264.99(i) or 264.100); (2) the constituent levels are at or below background levels; (since the detection monitoring program is designed to detect increases over background levels, a facility which was meeting a groundwater protection standard set at a level above background would continually be required to switch from detection monitoring to compliance monitoring; hence, the return to detection monitoring would not have any practical value unless constituent levels were at or below background levels)...."

Since returning to detection monitoring would have no practical value, historically the Department has never specified the compliance period (i.e., specific timeframe with an end date) in a post-closure permit whereby a groundwater protection standard was required. That is why Condition VI.F (Compliance Period) states "The compliance period during which the groundwater protection standard of LAC 33:V.3305.A applies is until the Administrative Authority has accepted the certification of completion of post closure care required by regulation and under Condition III.O.7 of this permit."

In light of this clarification, the Permittee may submit documentation establishing the formal end date of the compliance period (i.e., the active life of the unit and the date the groundwater protection standard was established). If this end date is prior to the end of the post-closure care period, a request for a permit modification may be submitted reestablishing a Detection Monitoring Program. However, the detection limits must be set at background levels.

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Action: The permit was revised.

The following sentence was added to the end of the first paragraph in Condition VI.F of the permit:

(The Permittee may submit documentation establishing the formal end date of the compliance period.)

In addition, the third sentence under Condition VI.I of the permit was revised as follows:

The Permittee must continue or expand the Compliance Monitoring Program until one of the following occurs: 1) ~~compliance with the groundwater protection standard is achieved for at least three (3) years (at that time, the Permittee must notify the Administrative Authority in writing, and upon approval submit a permit modification application to reestablish a Detection Monitoring Program)~~the compliance period has ended and the permit is modified to reestablish a Detection Monitoring Program based upon background levels; or 2) a Corrective Action Program is established with adequate monitoring as delineated in Condition VI.J and LAC 33:V.3321.D, and the permit is modified accordingly.

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Item: 5

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.B, Required Programs

Comment: There is no regulatory basis for requiring different standards for five of the groundwater monitoring wells (RN-06, RN-07, N-14, N-16, and N-23) versus the other five monitoring wells. All wells should be in a Detection Monitoring Program, and thus all wells would be Point of compliance (POC) wells.

The draft permit requires notification to the LDEQ when any of the hazardous constituents or indicator parameters are detected in concentrations equal to or exceeding the limits set forth in Condition VI, Table 3, at the point of compliance, or upon first detection in any other monitoring wells at the Geismar Facility. This Condition should be revised to require notification to the LDEQ in the event that constituents are detected above the constituent's groundwater protection standard at any of the wells listed in Condition VI, Table 2.

LDEQ The Department acknowledges your comment but does not concur.
Response:

As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified. The primary focus for the Compliance Monitoring Program is to monitor the groundwater at the point of compliance to determine whether the regulated unit is in compliance with the groundwater protection standard. Additional monitoring beyond the point of compliance is required to monitor the nature and extent of the release. Any hazardous constituents or indicator parameters detected in additional wells may be an indicator that the nature and extent of the release has changed and therefore requires notification to the Department.

The Point of Compliance is a "vertical surface located at the hydraulically downgradient limit of the waste management area..." Wells N-22, N-19, N-09R and RN-08 are NOT at the downgradient limit of the unit. The POC wells have detected contaminants: LAC 33:V.3303.C states "...all permitted facilities where pre-existing groundwater contamination continues to be present shall be required to institute compliance monitoring..." The wells outside of the POC are wells in which contaminants have not been detected and are acting as "sentry" wells to alert in case contamination moves further downgradient. Should any of these downgradient "detection" wells indicate contamination, their sampling frequency will be increased and additional wells

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('assessment' wells) will be required downgradient.

Lion must notify the Administrative Authority when any of the hazardous constituents or indicator parameters are detected in concentrations equal to or exceeding the concentration limits set forth in Condition VI, Table 3, at the point of compliance, or upon first detection in any other monitoring wells at the Geismar Facility. Alternatively, Lion must also notify the Administrative Authority if the groundwater protection standard is exceeded and follow modification procedures outlined in Condition VI.B.

In considering this comment, the Department has reevaluated the monitoring program for the regulated unit and will reduce the monitoring frequency in the final permit. Wells RN-06, RN-07, N-14, N-16, and N-23 must be sampled Semiannually for constituents listed in Condition VI, Table 3 and Annually for constituents listed in LAC 33:V.3325, Table 4. Wells RN-08, N-09R, N-15, N-19, and N-22 must be sampled Annually for constituents listed in Condition VI, Table 3.

Action: The permit was revised.

Condition VI, Table 2 was revised as follows:

**Condition VI, Table 2. RCRA Units, Point of Compliance and Monitoring Wells,
Sampling Frequencies, and Analytical Parameters**

| Well | Zone | Type | Point of Compliance | Sampling Frequency | Parameters |
|-------|----------|-----------------|---------------------|---|--|
| RN-06 | Zone III | DG ¹ | POC | Semiannual ^{±2} / Quarterly Annual ^{±4} | Condition VI, Table 3 / Table 4 of LAC 33:V.3325 |
| RN-07 | Zone III | DG | POC | Semiannual ^{±2} / Quarterly Annual ^{±4} | |
| N-14 | Zone III | DG | POC | Semiannual ^{±2} / Quarterly Annual ^{±4} | |
| N-16 | Zone III | DG | POC | Semiannual ^{±2} / Quarterly Annual ^{±4} | |
| N-23 | Zone III | UG ² | | Semiannual ^{±2} / Quarterly Annual ^{±4} | |
| RN-08 | Zone III | UG | | Semiannual Annual ^{±1} | Condition VI, Table 3 |
| N-09R | Zone III | UG | | Semiannual Annual ^{±1} | |
| N-15 | Zone VIA | DG | | Semiannual Annual ^{±1} | |

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| | | | | | | | |
|-------------------|------|----------|----|--|---------------------------------|--|------|
| ¹ DG = | N-19 | Zone III | DG | | SeminannualAnnual ^{±2} | | Down |
| | N-22 | Zone III | DG | | SeminannualAnnual ^{±2} | | |

Gradient

² UG = Up Gradient

^{3*} The sampling frequency is quarterly/semi-annual or annual (as indicated above) (dependent upon well type) for parameters on Condition VI, Table 3

^{4*} The sampling frequency is one annual event for parameters on Table 4 of LAC 33.V.3325 for the post-closure monitoring network

¹ DG = Down Gradient

² UG = Up Gradient

The heading name of Condition VI.I.1 was revised as follows:

VI.I.1. Quarterly Monitoring for Determining Compliance with the Groundwater Protection Standard

Condition VI.L.1 was revised as follows:

VI.L.1. Quarterly and Semi-Annual Groundwater Reports

A quarterly/semi-annual groundwater report for the point of compliance wells must be submitted to the Administrative Authority for each six three-month period. ~~A semi-annual groundwater report must be submitted for all wells listed in Condition VI, Table 2 to the Administrative Authority for each six-month period.~~ The reports shall include the following:

Condition VI.L.2.a was revised as follows:

VI.L.2.a. The report must contain the reporting requirements of Condition VI.L.1 for the final quarterly and semi-annual sampling periods.

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Item: 6

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.C, Groundwater Protection Standard

Comment: As previously commented, this Condition should be revised to reflect that all wells referenced in Condition VI, Table 2 are in detection monitoring and technically, all wells would be point of compliance wells. However, if this Condition is not revised, this Condition implies that corrective action may be required at wells not designated as point of compliance. It is unclear what would trigger corrective action at wells not designated as point of compliance, and what those corrective action levels would be. Correction and/or clarification is needed.

LDEQ The Department acknowledges your comment and will provide clarification.

Response:

As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified.

Any well that exceeds the groundwater protection standard will put Lion into a Corrective Action Program, unless Lion can provide proof that the exceedances can be attributed to something other than the Former Waste Lagoon System-Cell A. If the groundwater protection standard is exceeded at any well, a modification request must be submitted with a corrective action plan.

Action: The permit was not revised.

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Item: 7

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI, Table 2, RCRA Units Point of Compliance and Monitoring Wells, Sampling Frequencies, and Analytical Parameters

Comment: No reasoning is provided for the four wells designated as POC. Please clarify. As stated earlier, all wells should be in detection monitoring and thus a semiannual sampling frequency would apply to all 10 wells. Table 2 should be revised accordingly.

LDEQ Response: The Department acknowledges your comment and has provided clarification in the response to Item 5.

Action: The permit was revised per response to Item 5.

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Item: 8

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI, Table 3, Groundwater Monitoring Methods and Requirements

Comment: The Groundwater Protection RECAP Management Option - 1 (MO-1) standards for each constituent listed on Table 3 are incomplete. This commenter proposes to submit a completed Table 3 to the LDEQ identifying applicable Groundwater Protection MO-1 standards for all constituents listed in Table 3. Table 3 should also be revised to reflect that all wells are in detection monitoring and that the groundwater protection standard equals the RECAP MO-1 standard for each constituent listed.

LDEQ The Department acknowledges your comment and partially concurs.

Response: As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified.

Lion may submit RECAP MO-1 values for additional constituents as proposed in the comment. Additionally, in reviewing this comment the Department has determined that Lion must supply unit specific RECAP MO-1 values for all constituents that have had exceedances of the MCL for the Former Waste Lagoon System- Cell A. (Any RECAP MO-1 values proposed for additional constituents must also be unit specific.)

Action: The permit was revised.

Condition II.E.25.a (submittal of the revised SAP) in the Schedule of Compliance was revised as follows to remove the classification of the permit modification since the unit specific RECAP MO-1 values may be less stringent and would require a Class 3 modification:

II.E.25.a. Permittee must submit, within sixty (60) days after the effective date of the permit, an updated Groundwater Sampling and Analysis Plan, for approval that is consistent with Condition VI. Tables 2, 3, and 4 of this permit. Upon approval by the Administrative Authority, the Permittee will be required to do a ~~Class 1~~ permit modification.

Condition II.E.25.d in the Schedule of Compliance was added as follows:

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II.E.25.d. Permittee must submit, within ninety (90) days after the effective date of the permit, updated unit specific RECAP MO-1 values for the constituents that have had exceedances of the MCL for the Former Waste Lagoon System- Cell A.

Footnote 2 of Condition VI.C, Table 3 was added as follows:

² Unit specific RECAP MO-1 values will be added once they have been approved by the Administrative Authority. Until the unit specific values have been approved, the site wide RECAP MO-1 will be used.

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Item: 9

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI, Table 3, Groundwater Monitoring Methods and Requirements

Comment: Footnote 1 requires four replicates of the Standard Indicators, i.e., pH, specific conductivity, TOC, and TOX, and that pH and specific conductivity be recorded in the field upon collection. This is interpreted to mean that pH and specific conductivity need only be recorded immediately in the field and not reported by the analytical laboratory. Please confirm that this interpretation is correct.

**LDEQ
Response:** The Department acknowledges and concurs with your comment. pH and specific conductivity only need to be recorded in the field during the sampling event.

Action: The permit was not revised.

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Item: 10

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.E, Point of Compliance

Comment: The permit should be amended to reflect that all wells listed in Condition VI, Table 2, are in the Detection Monitoring Program and are all POC wells. If this change is rejected, it should be clarified that the sentence, "When contamination is detected at or beyond the point of compliance for the regulated unit, additional monitoring must be conducted per Condition VI.1.6," refers to detection of constituent concentrations above the applicable RECAP MO-1 standards at the other 6 wells listed in Condition VI, table 2, which are not currently labeled as POC wells.

LDEQ Response: The Department acknowledges your comment but does not concur. See response to Item 5 for clarification.

Action: The permit was not revised.

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Item: 11

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.G.2, General Requirements

Comment: This Condition requires that the Permittee implement a well inspection schedule to ensure that well structural and mechanical integrity is maintained and to protect against accidental damage and surface infiltration for all wells. The LDEQ should define "structural and mechanical integrity" or clarify what conditions would indicate that well structural and mechanical integrity was compromised. The second sentence requires the Permittee to submit a written report to the Administrative Authority "on any damage in accordance with Condition II.E.17 of this permit." Condition II.E.17 pertains to non-emergency unauthorized discharge notifications in excess of reportable quantities (24-hour oral notification; written report within 5 business days/ 7 calendar days). The triggering of the reporting requirement is ambiguous. Clarification is needed to indicate that the notification to the LDEQ would only be triggered by well damage that could pose a risk of release to groundwater or the environment in excess of reportable quantities, as required by Condition II.E.17 of the permit.

LDEQ Response: The Department acknowledges your comment and will provide clarification.

Ensuring structural and mechanical integrity consists of a visual inspection to ensure that there is not visible damage to a well that would impede the ability to pull a representative groundwater sample.

In addition, Condition VI.G.2 should reference Condition II.E.22 (Other Noncompliance) instead of Condition II.E.17 (Non-Emergency Unauthorized Discharge Notification).

Action: The permit was revised.

The second sentence of Condition VI.G.2. was revised as follows:

The Permittee must implement a well inspection schedule and submit a written report to the Administrative Authority on any damage in accordance with Condition II.E.~~22~~17 of this permit.

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Item: 12

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Conditions VI.G.5 and 6, General Requirements

Comment: The LDEQ has previously approved the use of low-flow purge technique at the Geismar Facility. This approval will be incorporated into the SAP to be submitted to the LDEQ within 60 days of the effective date of the final permit.

LDEQ The Department acknowledges your comment and concurs.

Response:

Lion shall include the use of the low-flow purge technique in the SAP that will be submitted per Condition II.E.25.a.

Action: The permit was not revised.

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Item: 13

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.G.7, General Requirements

Comment: This Condition required that samples containing greater than 5 NTU are only acceptable when well development is certified by a qualified geologist as "the best obtainable" and that an evaluation of turbidity must accompany all potentially affected analytical results. This Condition should be removed, as the Geismar Facility uses low-flow purge techniques to collect water samples, and detected metal concentrations at Cell A have never exceeded limiting RECAP standards.

If this Condition is not removed from the permit, additional clarification is needed as to the requirements of this Condition. For example, the term "the best obtainable" should be defined. Please note that in most cases, the well installation and development occurred over 18 years ago. Clarification is also needed as to when the geologist certification is to be submitted and on what this certification is to be based. The LDEQ should also provide the format/form for the certification. Please also provide clarification on the "evaluation of turbidity" the LDEQ will require.

LDEQ Response: The Department acknowledges your comment and will provide clarification.

Turbidity is required and can be tested using a separate meter from the flow-through cell used in low-flow sampling. Turbidity readings should decline as the well is purged. 5 NTU's or less is considered to be technically achievable and may be used as a goal.

Action: The permit was not revised.

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Item: 14

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.G.11, General Requirements

Comment: This Condition requires that the Permittee use one of the statistical procedures outlined in the SAP or in LAC 33:V.3315.H to determine whether concentrations have been exceeded for the hazardous constituents specified in Condition VI, Table 3. Condition VI, Table 3 presents Groundwater Protection standards based on RECAP. This commenter is proposing to replace the statistical analysis requirements of this Condition and other similar Conditions that employ a statistical analysis with a fixed threshold defined by the LDEQ approved RECAP, such as the MO-1 standard. It is submitted that the RECAP MO-1 standards should be incorporated into this permit and the SAP for each constituent listed in Condition VI, Table 3.

LDEQ The Department acknowledges your comment but does not concur.

Response:

The fixed MO-1 RECAP standards are the groundwater protection standards and can not be used as the action levels for the permit. Statistical methods must be used to determine an exceedance of the MCL.

Lion must use intra-well comparison to compare for statistical increases in contamination above the groundwater protection standard.

Action: The permit was not revised.

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Item: 15

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.I.2, Compliance Monitoring

Comment: This Condition requires that a statistical analysis be submitted within 60 days of the groundwater monitoring event. This commenter proposes to modify this Condition to incorporate the comments submitted as to Condition VI.G.11 (the use of a fixed MO-1 RECAP threshold versus a statistical analysis). Furthermore, it typically takes about 14 days to receive the analytical results. It is requested that the timeframe to submit any necessary data evaluation be revised to account for this delay, such that any necessary data evaluation be submitted within 60 days of receipt of analytical results.

LDEQ Response: The Department acknowledges your comment and partially concurs.

See response to Item 14 regarding statistical analysis.

The Department is requiring that the submittal of the statistical results be tied to the sampling event. An additional 30 days will be given to ensure Lion has received the analytical results. A statement regarding an extension request will also be added to the permit to ensure the Permittee has adequate time to receive the analytical results.

Action: The permit was revised.

Condition VI.I.2 was revised as follows:

VI.I.2. The Permittee must determine whether there is statistically significant evidence of contamination above the groundwater protection standard for any hazardous constituent or indicator parameter specified in Condition VI.D. Statistical methods shall conform to Condition VI.G.11 and shall be completed within sixty-ninety (60-90) days of the groundwater monitoring event. The Permittee may request an extension in writing if there is a delay in receiving the analytical results.

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Item: 16

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.I.5.a, Compliance Monitoring

Comment: This Condition requires that a statistical analysis be submitted within 60 days of the groundwater monitoring event. This commenter proposes to modify this Condition to incorporate the comments submitted as to Condition VI.G.11 (the use of a fixed MO-1 RECAP threshold versus a statistical analysis). Furthermore, it typically takes about 14 days to receive the analytical results. It is requested that the timeframe to submit any necessary data evaluation be revised to account for this delay, such that any necessary data evaluation be submitted within 60 days of receipt of analytical results.

LDEQ The Department acknowledges your comment and partially concurs.

Response: See response to Item 14 regarding statistical analysis.

The Department is requiring that the submittal of the statistical results be tied to the sampling event. An additional 30 days will be given to ensure Lion has received the analytical results. A statement regarding an extension request will also be added to the permit to ensure the Permittee has adequate time to receive the analytical results.

Action: The permit was revised.

Condition VI.I.5.a was revised as follows:

VI.I.5.a. The Permittee must determine whether there is statistically significant evidence of additional hazardous constituents not previously identified. Statistical methods shall conform to Condition VI.G.11 and shall be completed within ninetysixty (9060) days of the groundwater monitoring event. The Permittee may request an extension in writing if there is a delay in receiving the analytical results.

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Item: 17

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.I.6, Compliance Monitoring Program

Comment: As stated in an earlier comment, all groundwater monitoring wells listed in Condition VI, Table 2 should be in a Detection Monitoring Program. Thus, the discussion in this Condition to the effect that "the plume must be defined and monitored by additional monitoring wells..." should be removed, and the Condition should be revised in its entirety.

LDEQ The Department acknowledges your comment but does not concur.

Response: As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified.

Action: The permit was not revised.

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Item: 18

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.J, Corrective Action Program

Comment: As stated in an earlier comment, all groundwater monitoring wells listed in Condition VI, Table 2 should be in a Detection Monitoring Program. This Condition should be revised to reflect that program. The commenter agrees that the discussion of a Corrective Action Program is included for informational purposes only.

LDEQ Response: The Department acknowledges your comment but does not concur.

As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified.

Action: The permit was not revised.

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Item: 19

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: Body of Permit, Condition VI.L.1, Quarterly and Semi-Annual Groundwater Reports

Comment: The commenter does not understand if there is a difference between the requirements for a quarterly groundwater report and a semi-annual report, other than the quarterly report will only apply to any point of compliance wells and the semiannual report will apply to all wells listed in Condition VI, Table 2. However, if all wells are in a Detection Monitoring Program, there should be no requirement for a quarterly groundwater report. Only semiannual reports should be required.

LDEQ Response: The Department acknowledges your comment and will provide clarification.

As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified.

Condition VI.L.1 was revised to reflect the reduction in sampling frequency (see response to Item 5). With the reduced sampling frequency, a semiannual and annual report will now be submitted. The semiannual report will contain sampling and analytical information for the six-month period for wells RN-06, RN-07, N-14, N-16, and N-23. The annual report will contain sampling and analytical information for all of the wells and will include the information for the groundwater monitoring event in the second six-month period. In addition, the annual report will include a summary and interpretation of all groundwater activities for the preceding calendar year.

Action: The permit was revised per response to Item 5.

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Item: 20

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII.L.2 (the original comment incorrectly referenced VI.L.2), Notification Requirements for Assessment of Newly Identified SWMUs

Comment: This Condition refers to Appendix 1 Table 1. However, the draft permit only contains a Table 2. It is unclear if Table 1 is missing or if Table 2 is just mislabeled and should be Table 2. Please clarify.

LDEQ Response: The Department acknowledges your comment and concurs.

The reference to Table 1 should be changed to Table 2.

Action: The permit was revised.

Reference to "Appendix 1, Table 1" was changed to "Appendix 1, Table 2" in the second sentence of Condition VIII.L.2.

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Item: 21

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII.A, Alternate Corrective Action

Comment: The Alternate Corrective Action, the CAS approach, is not appropriate for the Geismar Facility. According to Condition VIII.A.1, the CAS Guidance Document should only be used when "the Administrator Authority determines that it will serve to facilitate the corrective action." As the LDEQ is aware, the Geismar Facility recently completed Phase II of its RCRA Facility Investigation (RFI) pursuant to the traditional RCRA corrective action approach discussed in Condition VIII.A. The Geismar Facility has conducted various investigations and subsequent corrective measures/ activities throughout the years under this traditional approach, upon notification to the LDEQ of its findings, its proposed corrective action or measures, and upon receiving the LDEQ's approval of the proposed actions/ measures. No issues or problems have been noted with this traditional procedure. Furthermore, both the traditional corrective action approach and the CAS approach utilize RECAP to determine the corrective action final risk goal performance standards. In short, the submittal of a Notice of Intent (NOI) and implementation of a CAS approach at this advanced stage of the Geismar Facility's traditional RCRA corrective action RFI process would be redundant and would not "facilitate the corrective action." In fact, it appears the intricacies of the CAS process would only serve to *retard* the corrective action process. It is respectfully requested that the traditional RCRA corrective action procedure utilized in the past continue as it has for many years and that the CAS approach provisions in this draft permit be deleted, or alternatively, remain in italic for informational purposes only in the event it is determined they are needed in the future during the term of this permit.

LDEQ The Department acknowledges your comment but does not concur.

Response: Clarification of the CAS process and the Department's rational for requiring the CAS permit language are provided in the response to Item 3.

Action: The permit was not revised.

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Item: 22

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII.B.1, Notice of Intent

Comment: As stated in a response to an earlier Condition, it is unclear what corrective action the LDEQ is claiming the Permittee must undertake at this time and what actions would be governed by this Condition, or if this information is presented for informational purposes only in the event these sections are implicated in the future. Furthermore, according to Table 2 of Appendix 1 of the draft permit, any need for corrective action is to be determined once the LDEQ completes its review of the RFI Report dated August 2007 and addenda thereto dated February, March, and August 2008, and the various closure certifications/verification submitted for various tanks and units in interim status, thus conflicting with the "within 60 days after the effective date to the permit" language of this Condition. Clarification is needed.

LDEQ Response: The Department acknowledges your comment and has provided clarification in the response to Item 3.

Action: The permit was not revised.

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Item: 23

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII.L.2, Notification Requirements for and Assessment of Newly Identified SWMU's and Potential AOCs

Comment: It is respectfully submitted that the requirements that each newly-identified SWMU or AOC be incorporated into Appendix 1, Table 1 of the post-closure permit by submittal of a Class 1 permit modification request is onerous and overly burdensome. It is requested that this Condition be removed, and that the Geismar Facility be allowed to continue its practice of notifying the LDEQ in writing within thirty (30) days of discovery of a new SWMU or AOC, which is the procedure required by the post-closure permit currently in effect. This notification becomes public record under Louisiana's Public Records Law and is thus accessible to the public. Any new SWUs or AOC identified during the term of this permit can then be incorporated into the permit at the time of the next permit renewal or at the time of any major permit modification in the interim.

LDEQ Response: The Department acknowledges your comment but does not concur.

The older permitting language regarding HSWA corrective action which contained the traditional approach had general provisions for modifying the permit to incorporate the units at the investigation stage (i.e., RFI). Under the regulations, the Department would have required a major modification (i.e., Class 2 or Class 3) to do so. Therefore, a Class 1¹ permit modification under the new CAS language is less burdensome than the original modification requirement, but still affords the public an opportunity to stay involved in the corrective action process. If more than 1 SWMU or AOC is discovered at the same time, they can all be covered under the same permit modification. The public notice requirements of a Class 1¹ permit modification (i.e., use of the mailing list) informs the public of the discovery of the SWMU or AOC in a timely manner, while the commenter's suggested method does not require any timely public notice for people who should want to be informed of the happenings of the facility.

Action: The permit was not revised.

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Item: 24

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII.N.1, NFA-ATT Determinations for Specific SWMUs/AOCs

Comment: It is respectfully submitted that the requirement that a No Further Action- At this Time (NFA-ATT) determination for a SWMU or AOC be requested by submittal of a class 1 permit modification request is onerous and overly burdensome. It is requested that this Condition be removed, and that the Geismar Facility be allowed to continue its practice of requesting a NFA-ATT determination in the individual investigation report submitted for the LDEQ's approval. These reports, and LDEQ's determinations thereon, become public record under Louisiana's Public Records Law and are thus accessible to the public. Any NFA-ATT determinations issued during the term of this permit can then be incorporated into the permit at the time of the next permit renewal or at the time of any major permit modification in the interim.

LDEQ Response: The Department acknowledges your comment but does not concur.

The older permitting language regarding HSWA corrective action which contained the traditional approach required a Class 3 permit modification after the NFA-ATT determination. A Class 1¹ permit modification is much less burdensome than the originally required Class 3 modification, but still affords the public an opportunity to stay involved in the corrective action process. If more than one SWMU or AOC receive an NFA-ATT at the same time, they can all be covered under the same permit modification. The public notice requirements of a Class 1¹ permit modification (i.e., use of the mailing list) informs the public of the NFA-ATT determination for the SWMU or AOC in a timely manner, while the commenter's suggested method does not require any timely public notice for people who should want to be informed of the happenings of the facility.

Action: The permit was not revised.

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Item: 25

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII. Appendix 1, Summary of the Corrective Action Activities

Comment: The Appendix 1 attached to the draft permit does not appear to present an accurate description of the current state of activities at the Geismar Facility. A suggested revised Appendix 1 is attached hereto with changes tracked. *(See Appendix 1 of the Responsiveness Summary.)*

LDEQ The Department acknowledges your comment and concurs.

Response: Appropriate changes were made to Appendix 1.

Action: The permit was revised.

A strikethrough and underline version of Appendix 1 showing the changes is included in Appendix 2 of this Responsiveness Summary.

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Item: 26

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII. Appendix 1, Summary of Corrective Action Activities

Comment: There is no Table 1 attached to Appendix 1, only a Table 2. It is unclear if Table 1 is missing or if Table 2 is just mislabeled and should be Table 2. Please clarify.

LDEQ Response: The Department acknowledges your comment and will provide clarification.
The table located in Appendix 1 is labeled correctly as Table 2. Table 1 is located in Condition VIII.

Action: The permit was not revised.

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Item: 27

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII. Table 2, Summary of Corrective Action Activities

Comment: This Table does not appear to present an accurate description of the current state of activities at the Geismar Facility. A suggested revised "Table 2" is attached hereto. (*See Appendix 1 of the Responsiveness Summary.*)

**LDEQ
Response:** The Department acknowledges your comment and concurs.

Appropriate changes were made to Appendix 1, Table 2.

Action: The permit was revised.

A strikethrough and underline version of Appendix 1, Table 2 is included in Appendix 2 of this Responsiveness Summary.

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Item: 28

Reference: Quoted from the August 6, 2008 comments from Conestoga-Rovers and Associates (CRA) on behalf of Chemtura Corporation (Chemtura).

Issue: HSWA Section, Condition VIII. Table 2, Summary of Corrective Action Activities

Comment: For clarification, Tank RV-10 simply replaced the Toluene Tar Tank in SWMU 16. Tank RV-10 did not become the SWMU. Furthermore, Tanks RV-10, PR-202, PV-42, PV-525, the Former Incinerator, and the waste storage pad were identified in the Geismar Facility's hazardous waste permit application and were accorded interim status by the LDEQ. Thus, these tanks, the Former Incinerator, and the waste storage pad are not SWMUs and should not be identified as such in this permit.

LDEQ The Department acknowledges your comment and partially concurs.

Response:

The Department agrees Tank RV-10 replaced the Toluene Tar Tank in SWMU 16.

The closure certification/verification letter for the tanks and the former incinerator separated the closure of the unit and discovered contamination of the soil and groundwater in the vicinity of the units. Due to residual contamination in the environmental media, the units were referred to corrective action and have been designated as corrective action units in the permit.

Action: The permit was not revised.

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Item: 29

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition II.E.22, Other Non Compliance

Comment: Lion requests concurrence on the scope of the phrase "other instances of noncompliance" cited under this section be limited to the scope of the Post Closure Permit (i.e. Cell A and SWMUs).

LDEQ The Department acknowledges your comment and concurs.

Response: See response to Item 1. "Other instances of non-compliance" would be limited to issues associated with the permit (i.e., requirements regarding the regulated unit and HSWA corrective action).

Action: The permit was not revised.

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Item: 30

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition II.E.25.b, Schedule of Compliance

Comment: Lion requests that the requirement to submit a Notice of Intent (NOI) to conduct corrective action in accordance with the Corrective Action Strategy (CAS) be removed from the proposed permit. Corrective action at the facility concerning Cell B has been completed and all data collected indicates that the facility is meeting the applicable limiting RECAP limiting standards for both Soil and Groundwater. With respect to the facility's Solid Waste Management Units (SWMUs) and Area of Concerns (AOCs) identified in the RFI, these areas have been under investigation, and reports have been submitted utilizing the RECAP approach. As indicated in Table 2 of Appendix 1 of the draft permit (see comment on condition VIII.L.2), any need for corrective action is to be determined once the LDEQ completes its review. Submitting an NOI at this stage in the corrective action process appears to be redundant and serves no beneficial purpose. Furthermore, this requirement does not agree with the CAS being an alternative to the traditional RCRA Corrective Action approach.

Alternatively, if the requirement is not removed from the permit, clarification is requested on exactly what type of submittals will be required subsequent to the submittal of an NOI. Once an NOI has been submitted under the CAS process, additional documents, such as Sampling and Analysis Plans, Conceptual Site Models, etc.; are required to be submitted. In this case, these documents have already been submitted and approved by the Louisiana Department of Environmental Quality (LDEQ). It is unclear from this condition to what degree these documents would have to be resubmitted. If submitted, it is also unclear if the documents would have to be reviewed and approved again under the CAS process.

LDEQ The Department acknowledges your comment but does not concur.

Response: Clarification of the CAS process and the Department's rational for requiring the CAS permit language are provided in the response to Item 3.

After submitting the NOI, a scoping meeting will be held between the Department and Lion to determine how current site-specific conditions translate into the CAS process. The requirements for future submittals will depend on the adequacy of previous submittals in fully defining the Performance Standards (Condition VIII.A.2) and Conceptual Site Model (Condition VIII.D) and any other information necessary to complete the CAS

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process.

Action: The permit was not revised.

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Item: 31

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition II.E.29, Annual Report

Comment: Lion requests concurrence on the scope of the annual reporting requirement cited under LAC 33:V.1529.D being limited to the scope of the Post Closure Permit (i.e. Cell A and SWMUs). The requirements of this section are intended for active operating TSDFs. Any potentially applicable sections would have been addressed in the Permit Renewal Application, Financial Assurance Requirements, Groundwater Monitoring Reports and the facility's Waste Minimization Plan. Since this regulatory citation is applicable to TSDFs only, Lion would like to clarify that this requirement does not extend into current generator activities at the facility.

LDEQ Response: The Department acknowledges your comment and will provide clarification.

TSD facilities that are in post-closure are subject to certain annual reporting requirements. Items to be considered for the annual report under a post-closure permit include but are not limited to the following: Laboratory QA/QC procedures (Condition II.E.9.c.), any previously-unreported instances of "other noncompliance", as applicable (Condition II.E.22), any previously-unreported changes to documents maintained onsite (Condition II.E.28), post-closure care activities including inspections and maintenance (Condition V.B.5), annual groundwater report (Condition VI.L.2), and waste minimization certification (Condition VII.A.1). Also, an annual update to the financial assurance mechanism that reflects the current post-closure cost estimate is required.

Additionally, since Lion is a Large Quantity Generator (LQG) of hazardous waste (albeit as a result of activities not associated with this permit), this requirement would be applicable per LAC 33:V.Chapter 11.

Action: The permit was not revised.

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Item: 32

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition II.E.30, Manifest

Comment: Lion requests concurrence on the scope of the manifest discrepancies and unmanifested wastes reporting requirement as required by LAC 33:V.309L.8 and 9. These citations appear to address both active Generator and TSDF activities. Since the closed landfill is not currently active, and no manifesting is associated with the permitted unit, this section is not applicable. Lion would like to clarify that this requirement does not extend into current generator activities at the facility, and only applies to the scope of the Post Closure Permit (i.e. Cell A and SWMUs).

LDEQ Response: The Department acknowledges your comment and will provide clarification.

The information listed in Condition II.E.30 of the permit is for facilities that are actively managing hazardous waste. Any future corrective action activities generating hazardous waste would be subject to these requirements.

Additionally, since Lion is a Large Quantity Generator (LQG) of hazardous waste (albeit as a result of activities not associated with this permit), this requirement would be applicable per LAC 33:V.Chapter 11.

Action: The permit was not revised.

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Item: 33

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition III.K.4, Arrangements with Local Authorities

Comment: Lion requests that the requirement that the documentation of written arrangements included in the Annual Report be removed from the permit. These arrangements need not be reissued each year by the local authorities, but rather will be updated when pertinent changes to the Contingency Plan occur. That is, the same letter may serve as documentation of an arrangement over several years. There is currently no requirement in LAC 33:V.1511.G to renew these agreements on an annual basis.

LDEQ Response: The Department acknowledges your comment but does not concur.

The Department agrees that the Arrangements with Local Authorities need only be updated when there are changes. However, copies of the original letter should be included in the annual report to demonstrate that such arrangements have been made and are still in effect.

Action: The permit was not revised.

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Item: 34

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition IV.B, Required Programs

Comment: The draft permit requires that the Permittee conduct a Compliance Monitoring Program per Condition VI.I. Condition VI.C states that the "MO-1 concentration limits for each hazardous waste constituent specified in Condition VI, Table 3 shall serve as the groundwater protection standard." Condition VI.I requires that this program must continue until "1) compliance with the groundwater protection standard is achieved for at least 3 years (at that time, the Permittee must notify the Administrative Authority in writing, and upon approval submit a permit modification application to reestablish a Detection Monitoring Program). . . ." A review of groundwater monitoring data for the Geismar Facility shows that the constituent concentrations in the 10 groundwater monitoring wells listed in Condition VI, Table 2 (including the point of compliance wells) have not exceeded the RECAP MO-1 standards for over 3 years. Given this data, there is no basis for a Compliance Monitoring Program at the Geismar Facility. Therefore, all applicable portions of the permit should be revised to remove the requirement for a Compliance Monitoring Program and to replace this requirement with a Detection Monitoring Program. These sections would include, but are not limited to, Condition VI. A through L, including Tables 1 through 4.

LDEQ The Department acknowledges your comment but does not concur.

Response: As stated in the response to Item 4, Lion will continue to be in a Compliance Monitoring Program, unless the permit is modified.

Action: The permit was revised per response to Item 4.

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Item: 35

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI. Table 2 RCRA Units, Point of Compliance and Monitoring Wells, Sampling Frequencies, and Analytical Parameters

Comment: The asterisk note should be clarified by removing the phrase "quarterly/semi-annual (dependent on well type)" and replaced with "either quarterly or semi-annual (as indicated above)".

LDEQ Response: The Department acknowledges your comment and concurs.
In addition, the footnote for Condition VI, Table 2 will be revised to reflect the change in monitoring frequency per response to Item 5.

Action: The permit was revised.

See response to Item 5 for changes made to the footnotes for Condition VI, Table 2.

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Item: 36

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI. Table 3 Groundwater Monitoring Methods and Requirements

Comment: Lion has submitted to the agency, in previous reports, the applicable MO-1 Values which should be entered into Condition VI, Table 3 under the Groundwater Protection Standard column heading. Lion can submit these values under separate cover at the agency's request. The MCL column should also state the appropriate unit of measurement.

LDEQ The Department acknowledges your comment and partially concurs.

Response: See response to Item 8 regarding submittal of unit specific MO-1 values.

The title of the Maximum Concentration Limit column of Condition VI.I, Table 3 will be edited to include "mg/l" (i.e., milligram/liter).

Action: The permit was revised as per response to Item 8.

In addition, the MCL column title of Condition VI.I, Table 3 was revised as follows:

Maximum Concentration Limit (mg/l)^b

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Item: 37

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI. E, Point of Compliance

Comment: Lion requests clarification of the phrase "...at or beyond the point of compliance...". Specifically, is this meant to include any future borings located between the POC and Downgradient (DG) wells? Also, Lion is currently monitoring two permeable zones; Zone III and Zone VIA. Lion understands that no further vertical monitoring will be required unless a detection is seen in Zone VIA.

As further clarification, Lion understands that detections of hazardous constituents or indicator parameters with no Groundwater Protection Standard will not trigger corrective action.

LDEQ The Department acknowledges your comments and will provide clarification.

Response:

The second paragraph of Condition VI.E states:

"When contamination is detected at or beyond the point of compliance for the regulated unit, additional monitoring must be conducted per Condition VI.I.6. This shall include the next vertical aquifer or permeable zone below the uppermost monitored zone. Until such time as hazardous constituents are no longer detected at the point of compliance and beyond, the groundwater quality at each monitoring well (e.g., point of compliance wells, plume defining wells and recovery wells) identified in Condition VI, Table 2 must be monitored. Additional monitoring wells will be installed, as required."

The primary focus of the groundwater protection program is to monitor the groundwater at the point of compliance. When there has been a "detection" of hazardous constituents or indicator parameters, additional monitoring is required beyond the point of compliance to monitor the nature and extent of the release. Since the nature and extent of the release has already been delineated, the above requirement does not apply to Lion, unless contamination is found at the monitoring wells that were previously non-detect. If further contamination is subsequently identified, additional monitoring must take place. Regarding vertical monitoring, no additional monitoring is required unless a detection is indicated in Zone VIA.

If there is detection of a constituent that does not have a groundwater

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protection standard, Lion must submit for approval a unit specific MO-1 RECAP standard for the constituent that had the detection. A class 3 permit modification to include the new standard will be required upon approval. Once the groundwater protection standard is set and if the standard is exceeded a corrective action plan must be submitted as required by Condition VI.1.3.b. (As discussed in Item 8, unit specific RECAP MO-1 values will be required.)

Action: The permit was not revised.

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Item: 38

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI.F, Compliance Period

Comment: This permit condition states that the compliance period cannot end until the Permittee has demonstrated that the corrective action has been effectively implemented and the Groundwater Protection Standard has not been exceeded for a period of 3 consecutive years. Lion would like to clarify that this condition is applicable only at the POC monitoring wells.

LDEQ Response: The Department acknowledges your comment and will provide clarification.

A point of compliance is established immediately downgradient from a regulated unit in order to determine any release at the earliest possible time. A groundwater protection program is established when a regulated unit is first constructed and begins operations. Therefore, there would be no existing contamination in the groundwater at or beyond the point of compliance. Once a release has occurred, the Permittee is required to determine the full nature and extent. This includes installing wells beyond the point of compliance, as deemed necessary.

LAC 33:V.3321 requires a Corrective Action Program at the point of compliance and beyond once the groundwater protection standard has been exceeded. (It should be noted that if corrective action were to begin when a release is first detected, it may be possible to avoid impact beyond the point of compliance.) In conjunction, a groundwater monitoring program is required to demonstrate the effectiveness. Such a monitoring program may be based on the requirements for a Compliance Monitoring Program and must be as effective as that program in determining compliance with the groundwater protection standard and in determining the success of the corrective action program. So, while the wells at the point of compliance are used to demonstrate the effectiveness of the corrective action, it is understood that the entire plume (i.e., release area) must also be in compliance.

Action: The permit was not revised.

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Item: 39

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI.G.2 General Requirements

Comment: This Condition requires that the Permittee implement a well inspection schedule and submit a written report to the Administrative Authority on any damage in accordance with Condition II.E.17 of this permit. Condition II.E.17 pertains to non-emergency unauthorized discharge notifications in excess of reportable quantities (24-hour oral notification; written report within 5 business days/7 calendar days). This notification requirement should be limited to only those findings that could pose a risk of release to groundwater or the environment in excess of reportable quantities.

LDEQ
Response: The Department acknowledges your comment and concurs.

See response to Item 11.

Action: The permit was revised per response to Item 11.

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Item: 40

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI.G.7, General Requirements

Comment: This Condition requires that samples containing greater than 5 NTU are only acceptable when well development is certified by a qualified geologist as "the best obtainable" and that an evaluation of turbidity must accompany all potentially affected analytical results. This Condition should be removed, as the Geismar Facility uses low-flow purge techniques to collect water samples, and detected metal concentrations at Cell A have never exceeded limiting RECAP standards.

If this Condition is not removed from the permit, additional clarification is needed as to the requirements of this Condition. For example, the term "the best obtainable" should be defined. Clarification is also needed as to when the geologist certification is to be submitted and on what it is to be based. Please note that in most cases, the well development occurred over 18 years ago. The LDEQ should also provide the format/form for the certification. Please also provide clarification on the turbidity evaluation the LDEQ will require.

LDEQ Response: The Department acknowledges your comment and has provided clarification in the response to Item 13.

Action: The permit was not revised.

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Item: 41

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI.G.11, General Requirements

Comment: This Condition requires that the Permittee use one of the statistical procedures outlined in the SAP or in LAC 33:V.3315.H in determining whether concentrations have been exceeded for the hazardous constituents specified in Condition VI, Table 3. It is submitted that the upper control limit (UCL) is an appropriate statistical procedure, and in the specific context of this permit, the UCL equals the RECAP MO-1 standard and should be incorporated into this permit.

LDEQ Response: The Department acknowledges your comment but does not concur.
See response to Item 14 regarding statistical analysis.

Action: The permit was not revised.

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Item: 42

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: Body of the Permit, Condition VI.I, Compliance Monitoring Program

Comment: The language of this permit condition implies that any detection in a POC well will require the Permittee to conduct a Compliance Monitoring Program and subsequently modify the permit to reestablish the Detection Monitoring. The existing POC wells have detected concentrations of compounds below the applicable Limiting RECAP Standard (MO-1). These MO-1 standards were obtained as part a corrective action for the Cell A closed landfill. This appears to indicate that, upon issuance of the permit, Lion would have to immediately modify the permit and request Detection Monitoring or re-enter corrective action for an already mitigated unit. This process also appears to repeat itself with no alternate recourse until POC concentrations are non-detect. Lion requests clarification on the intent of this permit condition.

LDEQ Response: The Department acknowledges your comment and has provided clarification in the response to Item 4.

Action: The permit was revised per response to Item 4.

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Item: 43

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: HSWA Section, Condition VIII.L.2, Notification Requirements for Assessment of Newly Identified SWMUs

Comment: This condition refers to Appendix 1, Table 1. However, the draft permit on the LDEQ website only contains a Table 2. It is Lion's belief that the Table should be labeled "Table 1".

LDEQ Response: The Department acknowledges your comment and concurs.
See response to Item 20.

Action: The permit was revised per response to Item 20.

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Item: 44

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: HSWA Section, Condition VIII.L.2, Notification Requirements for Assessment of Newly Identified SWMUs

Comment: This requirement states that it will be requested by the agency that a newly identified SWMU or AOC be added to the permit by submitting a Class 1¹ permit modification. This requirement may present an unreasonable burden on both the facility and the LDEQ. While decommissioning/dismantling activities are ongoing at the facility, it is likely that there will be subsequent discoveries of potential SWMUs/AOCs. This has been demonstrated by the discovery of at least 5 SWMUs/AOCs since the start of decommissioning efforts. Lion proposes that by March 31 of each following year, the facility will submit a Class 1¹ permit modification to include any SWMUs or AOCs identified during the previous calendar year.

LDEQ The Department acknowledges your comment but does not concur.

Response: See response to Item 23.

Action: The permit was not revised.

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Item: 45

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: HSWA Section, Condition VIII. Appendix 1

Comment: The Appendix 1 attached to the draft permit does not appear to present an accurate description of the current state of activities at the Geismar Facility.

LDEQ The Department acknowledges your comment and concurs.

Response: See response to Item 25.

Action: The permit was revised per response to Item 25.

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Item: 46

Reference: Quoted from the August 5, 2008 comments from Lion Copolymer

Issue: HSWA Section, Condition VIII. Table 2

Comment: This Table does not appear to present an accurate description of the current state of activities at the Geismar Facility. In addition, newly identified SWMUs/AOCs reported to the agency since the draft of this permit should be included in the final copy.

LDEQ Response: The Department acknowledges your comment and concurs.
See response to Item 27.

Action: The permit was revised per response Item 27.

APPENDIX 1 of the Responsiveness Summary (The suggested revised Appendix 1 of the CAS submitted by Conestoga-Rovers & Associates, Item Numbers 25 and 27 .)

APPENDIX I

SUMMARY OF SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOC), CLOSURE ACTIVITIES, AND/OR CORRECTIVE ACTION ACTIVITIES

The intent of Appendix 1 is to provide an overview of the history and current status of the SWMUs, AOCs, closure activities and/or corrective action activities at the site at the time of issuance of the final permit and may not necessarily provide a definitive regulatory determination for a particular SWMU or AOC. The classification of an individual SWMU or AOC is subject to change by the Administrative Authority based on future geological/hydrogeological condition and future available information available to the Administrative Authority.

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IDENTIFICATION OF SWMUs, AOCs AND CORRECTIVE ACTION ACTIVITIES TO DATE

The United States Environmental Protection Agency conducted a preliminary review and inspection and issued a RFA in August 1987 that identified 26 SWMUs and 7 AOCs. Lion conducted a waste analyses and release investigation on 17 SWMUs and 3 AOCs in late 1990 and early 1991 to address the items that were listed in the RFA. The goal of the preliminary investigation was to determine the medias affected, to characterize the waste and constituents in question, and to identify the releases to the environment. The findings were reported to EPA in a report dated April 17, 1991. A RFI work plan was submitted to EPA on July 18, 1991. EPA approved the RFI work plan and the preliminary report on September 25, 1991. Phase I of the RFI was conducted to determine whether a SWMU or AOC released hazardous waste constituents into the environment; and if they have released, what COCs were released. The RFI Phase I investigation took place between January and June 1992. Lion submitted to LDEQ the RFI Phase I report on December 3, 1992 and approved the Phase I interim report on March 30, 1998. After the Phase I report the number of SWMUs was reduced to 12 and the number of AOCs was reduced to 2. Two additional SWMUs were discovered following the completion of the Phase I RFI report, the Fire Pond Drum Area and EDC Storage Vessel, which were included in the Phase II RFI investigation. The Phase II RFI was conducted to further delineate the extent of the contamination. The Phase II RFI work plan was submitted to LDEQ in February 2001 and was approved November 2, 2006. The Phase II RFI work plan identified 12 SWMUs and two AOCs for investigation at the site that potentially contained soil and/or groundwater constituents that exceeded the applicable RECAP screening standards developed for each SWMU/AOC. Phase II RFI work was conducted between December 2006 and January 2007. The Phase II RFI report was submitted to the LDEQ in August 2007. The 12 SWMUs and two AOCs investigated during the Phase II RFI are discussed below.

The Sulfur Recovery Unit (SRU) includes three SWMUs, SWMU 5 (Flexzone Tar Truck Unloading Area), 11e (Flexzone Sump), and 16 (Toluene Tar Tank or Flexzone Tank). The original Flexzone sump and tank have been replaced and a secondary containment has been installed around the entire area. The areas are described below:

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SWMU 5: The Flexzone Tar Truck Unloading Area is approximately 10 ft east of the Toluene Tar Tank in the northwest corner of the facility. The area is used to offload

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toluene tar, which is transferred by truck from the process unit. The Flexzone Tar Tank Unloading Area has been in operation since 1975.

SWMU 11e: The Flexzone Sump is located between the Toluene Tar Tank Unloading Area and the Toluene Tar Tank. It was designed to collect excess tar from the Toluene Tar Tank. The sump was constructed below grade with concrete and was replaced in kind in 1988.

SWMU 16: The Toluene Tar Tank was a carbon steel tank used to store the Flexzone toluene tars prior to disposal off-site. The tank was constructed in 1974 and was replaced in kind in the 1980s with Tank RV-10. Tank RV-10 has a capacity of 13,000 gallons, is constructed aboveground, and is horizontally oriented. The dimensions of the tank are approximately 9 feet in diameter and 27 feet in length. The tank is heated and maintained under a nitrogen blanket with back-pressure control system at 25 lbs psi.

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Soil and groundwater samples collected from these SWMUs within the SRU during the Phase II RFI did not exhibit constituent concentrations or sample quantitation limits (SQLs) in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a No Further Action-At This Time (NFA-ATT) determination is pending the Administrative Authority's review.

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SWMU 10: The Monochem Landfill is located in Section 11-T10A-R2E, southwest of the facility and within 300 ft of the Mississippi River levee. The Monochem Landfill occupies approximately 9 acres and has a shallow groundwater monitoring network around its perimeter.

SWMU 11a: The Celogen OT Sump is an open top, below grade structure constructed of concrete and covered with a metal grate. The Celogen OT Sump is a part of the Celogen OT Unit process wastewater collection system. The process wastewaters generated by the unit are aqueous and contain dissolved 1,2-dichloroethane (EDC). In the early 1990s, the initial RFI of SWMU 11a was conducted. The findings from the initial RFI prompted a supplemental assessment to delineate groundwater beneath the SWMU. A supplemental assessment was conducted in 1999. The investigations revealed that EDC concentrations were present in shallow soil and groundwater within a localized area beneath the Celogen OT Unit. Interim corrective actions conducted for the Celogen OT Sump SWMU involved a dual phase extraction pilot study on monitoring wells OT-1 and OT-6 (groundwater samples extracted from these wells contained the highest dissolved EDC concentrations) to determine the effectiveness of simultaneously mitigating the unsaturated zone and the shallow water bearing zone (Zone III). This extraction procedure was conducted once a month from September 2006 until March 2007 for approximately 8 hours each event. Analyses of groundwater samples collected from six monitoring wells installed in the Celogen OT Unit (wells OT-1 through OT-6) indicated a reduction in the dissolved EDC concentrations in four of the six wells (perimeter wells OT-2 through OT-5). EDC concentrations fluctuated throughout the duration of the pilot study, implying that dissolved EDC from areas surrounding the wells was being recovered by the wells. The Geismar Facility is exploring various options, including an extended trial dual phase

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extraction program, to further mitigate EDC concentrations in soil and groundwater at the Celogen OT Unit.

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SWMU 11b: The BHT/B9 Sump is a concrete sump which is partially below grade, with lateral dimensions of approximately 18 ft by 11 ft; a narrow metal grate is the only opening of the surface. The sump is part of the process wastewater collection system for the BHT process unit. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the Administrative Authority's review.

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SWMU 11c: The Flexzone Pond is inactive (closed in 2003). The Flexzone Pond was a below-grade concrete sump approximately 9 ft deep, with lateral dimensions of 40 ft by 50 ft. In the spring of 2003, the pond was cleaned by removing approximately 587,558 pounds of material. The empty structure was partially filled with a fluid material (a concrete mixture).

During a subsurface assessment in close proximity to the closed former Flexzone Pond in 2004, a localized light non-aqueous phase liquid (LNAPL) was discovered on the exterior of the former Flexzone Pond near the southwest corner at a depth of approximately 7 ft below ground surface (bgs). Monitoring wells were installed during the January 2007 RFI to help define the extent of the COCs in the groundwater in the vicinity of the LNAPL. Analytical results confirmed that the LNAPL is isolated to an area immediately adjacent to the former Flexzone Sump.

SWMU 11d: The UDMH Sump is a below grade concrete sump with lateral dimensions of approximately 10 ft by 10 ft. The sump is used to temporarily store process water from the BHT production unit. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the Administrative Authority's review.

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SWMU 11f: The Neutralization Sump is a below-grade concrete sump, located toward the center of the Geismar Facility near the Flexzone Unit. The sump is part of the process wastewater collection system and is used to neutralize process water through the addition of either acid or caustic, as needed. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the Administrative Authority's review.

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SWMU 11g: The Thiazoles Sump collects process wastewater from the Thiazoles Unit. The sump is constructed and is set below grade, although the upper portions of the sump are above grade. Two temporary monitoring wells at SWMU 11g yielded turbid borehole water samples which, when analyzed, had concentrations of dibenz(a,h)anthracene that exceeded the limiting RECAP standard. Two new monitoring wells with pre-packed screens were installed in January/February 2008. Samples collected from these 2 new monitoring wells reported constituent concentrations below all applicable RECAP standards. These results were reported

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to the LDEQ in a February 2008 RECAP addendum. The Geismar Facility's request for a NFA-ATT determination for this SWMU is pending the Administrative Authority's review.

SWMU FP: The Fire Pond Drum Area was situated on the southern and western exterior of the Fire Pond. It contained buried drums and debris that were removed. Corrective actions were completed in January 2007 through the removal and off-site disposal of approximately 5,500 cubic yards of material. Analyses of samples collected from the bottom and sides of the excavated area indicated that the corrective action effectively mitigated this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the Administrative Authority's review.

SWMU EDC: The EDC Storage Vessel is a 12,000 gallon storage vessel that was put into service at the Geismar facility in 1981. The EDC Storage Vessel is constructed of steel, is cylindrical in shape, horizontally oriented above the ground on concrete "saddles" and is constructed within a concrete secondary containment system. The vessel is located in the western portion of the Geismar Facility.

A limited investigation of the EDC Storage Vessel was conducted in the late 1990s after an accidental overflow of rinse water from the vessel. The limited assessment indicated detectable concentrations of EDC in shallow soil and borehole water samples collected from beneath the secondary containment area for the vessel. The Geismar Facility is exploring various options, including a trial dual phase extraction program similar to that employed at the Celogen OT Unit, to mitigate EDC concentrations at the EDC Storage Vessel.

AOC-A: Rail Spot 18 - The Geismar Facility's surface water runoff control system is designed to separate process area stormwater runoff from the general area (non-contact) stormwater runoff. AOC-A is a stormwater ditch. The ditch segment of interest is approximately 100 ft long and 20 ft wide. This ditch receives runoff from the Rail Spot Unloading Area, the vacant area north of the Rail Spot and the occasional overflow runoff from the Flexzone Tank Farm area during periods of heavy rain. Soil and groundwater samples collected from this AOC during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this AOC. The Geismar Facility's request for a NFA-ATT determination is pending the Administrative Authority's review.

AOC-D: Process Area Stormwater Drainage System (Chemical Process Area) - The stormwater drainage system within the chemical process areas of the Geismar Facility is designed to transport contact stormwater from the process area. Soil and groundwater samples collected from this AOC during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this AOC. The Geismar Facility's request for a NFA-ATT determination is pending the Administrative Authority's review.

Two new SWMUs, the Sulfur Washout Basin (SWB) and the High-Boiling Tar Drumming Area Sump (HBT), were discovered in November 2007 after the Phase II RFI was completed:

SWMU SWB: Sulfur Washout Basin - The SWB was in the Thiazoles Unit and received washout from pumps that contained sulfur and residual carbon disulfide.

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The United States Environmental Protection Agency conducted a preliminary review and inspection and issued a RFA in August 1987 that identified 26 SWMUs and 7 AOCs. Lion conducted a waste analyses and release investigation on 17 SWMUs and 3 AOCs in late 1990 and early 1991 to address the items that were listed in the RFA. The goal of the preliminary investigation was to determine the medias effected, to characterize the waste and constituents in question, and to identify the releases to the environment. The findings were reported to EPA in report dated April 17, 1991. A RFI work plan was submitted to EPA on July 18, 1991. EPA approved the RFI work plan and the preliminary report on September 25, 1991. Phase I of the RFI was conducted to determine whether a SWMU or AOC released hazardous waste constituents into the environment; and if they have released, what COCs were released. The RFI Phase I investigation took place between January and June 1992. Lion submitted to LDEQ the RFI Phase I report on December 3, 1992 and approved the Phase I interim report on March 30, 1998. After the Phase I report the number of SWMUs was reduced to 12 and the number of AOCs was reduced to 2. Two additional SWMUs were discovered following the completion of the Phase I RFI report, the Fire Pond Drum Area and EDC Storage Vessel, which were included in the Phase II RFI investigation. The Phase II RFI was conducted to further delineate the extent of the contamination. The Phase II RFI work plan was submitted to LDEQ in February 2001 and was approved November 2, 2006. Phase II RFI work was conducted between December 2006 and January 2007.

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SWMU HBT - High-Boiling Tar Drumming Area Sump - The HBT was located in the Thiazoles Unit of the Geismar Facility and collected stormwater runoff and washdowns from an area that was used to drum high-boiling tar wastes.

The two SWMUs were excavated and the surrounding soil was removed. Surface investigation for SWMUs SWB and HBT took place in January 2008 and was consistent with the 2003 RECAP and the Work Plan approved by LDEQ in November 2006. Soil and borehole water samples collected from these two new SWMUs did not exhibit constituent concentrations or SOLs in excess of the Limiting RECAP standards developed for these SWMUs. The results of the investigation were submitted to the LDEQ in a March 2008 RFI Addendum. The Geismar Facility's request for a NFA-ATT for the SWB and HBT SWMUs is pending the LDEQ's review.

All of the information regarding SWMU 5, SWMU 11e, SWMU 16, SWMU 10, SWMU 11a, SWMU 11b, SWMU 11c, SWMU 11d, SWMU 11f, SWMU 11g, SWMU FP, SWMU EDC, AOC A, and AOC D was taken from the August 2007 RFI/RECAP report. The information regarding SWMU SWB and SWMU HBT was taken from the March 2008 RFI/RECAP Addendum. Lion is currently awaiting LDEQ approval of the August 2007 RFI Phase II report and the RFI Addenda reports submitted in February and March 2008.

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A new SWMU, the Deepwell Tank Farm Sump (DTF), and a new AOC, the Former Bay Minette Acid Tank (BMAT), were discovered and identified by the Geismar Facility in May 2008. The Deepwell Tank Farm was located within an earthen berm and drained to a 4x4x4 foot concrete sump, which was the collection point for any spills of non-hazardous wastewater that historically may have originated from the deepwell tanks. The Former Bay Minette Acid Tank was used to store sulfuric acid containing trace amounts of DNBP, which was used in the Facility's wastewater treatment system for neutralization.

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Upon completing WV-01 wastewater tank decommissioning, Lion personnel commenced the cleanout of the associated Deepwell Tank Farm Sump, at which time they discovered visual staining of soil surrounding the sump. An attempt was made to excavate the discolored soil, but visual signs of discoloration still remained.

In the process of removing the secondary containment around the Former Bay Minette Acid Tank, Lion personnel discovered discolored (yellow) soil below the removed containment. Lion personnel attempted to remove the discolored area by excavating the first 3 feet of soil from an approximate 2,500 square foot area. It was determined that the excavation was not sufficient to remove all potentially impacted areas, and the project was terminated. Further investigation activities at the DTF and the BMAT were conducted the week of July 26, 2008, and results were pending at the time of this submittal.

CLOSURE ACTIVITIES TO DATE

The following were identified in the Geismar Facility's hazardous waste permit application and were accorded interim status by the LDEQ and have recently been closed. The closures of these

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tanks and former incinerator were approved by the LDEQ in correspondence dated April 7, 2008, and approval of the subsurface surrounding each is pending review by the LDEQ.

Tank PV-42 - As a part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PV-42 in January 2007. Tank PV-42 is located in the Thiazoles Area of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated five constituents in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or sample quantitation limits (SQLs) that exceeded the soil RECAP Screening Option Screening Standards (SOSS) - iron, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethionene, benzenethiol and N-nitrosodimethylamine¹. These soil constituents were further evaluated under the RECAP Management Option - 1 (MO-1) and/or Management Option-2 (MO-2). Only one constituent (benzenethiol) was detected in one shallow soil sample (0 to 2 feet below surrounding grade) at one of the soil boring locations at a concentration above the limiting RECAP standard developed for the area investigated around the tank. The tank and the area immediately surrounding the tank were inspected during the investigation activities. The tank's secondary containment system was intact and showed no evidence of leaks or spills from the tank. Based on the operational history of the tank (an aboveground tank placed on footings that elevate the bottom of the tank above the surrounding surface, used to store spent methanol, located within a concrete secondary containment with no evidence of leaks or spills from the tank), there is no evidence that the constituent benzenethiol is associated with the tank.

Analytical results from borehole water samples collected from the area of investigation indicated twenty constituents in select samples with concentrations or SQLs that exceeded the groundwater RECAP SOSS - arsenic, barium, cadmium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolethione, 2(3H)-benzothiazolethionene, 4-bromophenyl phenyl ether, benzenethiol, benzo(a)pyrene, benzothiazole, bis(2-ethylhexyl)phthalate, hexachlorobenzene, hexachlorobutadiene, methylbenzothiazole, N-nitrosodimethylamine¹, pentachlorophenol, and total difluorobenzene. These borehole water constituents were further evaluated under the RECAP MO-1 and/or MO-2, as applicable, and none exceeded these standards.

Tank PR-202 - As a part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PR-202 in January 2007. Tank PR-202 is located in the Unsymmetrical Dimethylhydrazine (UDMH)/Butylated Hydroxytoluene (BHT) Area within the southwestern portion of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Deleted: SWMU SWB: Sulfur Washout Basin - The SWB received washout from pumps that contained sulfur and residual carbon disulfide.

SWMU HBT - High-Boiling Tar Drumming Area - The HBT was located in the Thiazoles Unit of the Geismar Facility and collected stormwater runoff and washdowns from an area that was used to drum high-boiling tar wastes.

SWMUs SWV and HBT were discovered in November, 2007. The two SWMUs were excavated and the surrounding soil was removed. Surface investigation for SWMUs SWB and HBT took place in January 2008 and was consistent with the 2003 RECAP and the Work Plan approved by LDEQ in November 2006.

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Analytical results from the area of investigation indicated four constituents [iron, benzenethiol, N-nitrosodimethylamine¹, and tert-butyl-4-methylphenol(t-BPC)] in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or sample quantitation limits (SQLs) that exceeded the limiting soil RECAP Screening Option Screening Standard (SO SS). These soil constituents were further evaluated under the RECAP Management Option - 1 (MO-1), and none exceeded the MO-1 standard.

Analytical results from borehole water samples collected from the area of investigation indicated 20 constituents in select samples -- arsenic, barium, beryllium, cadmium, chromium, iron, lead, nickel, vanadium, zinc, 2(3H)-benzothiazolethione, benzenethiol, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, hexachlorobenzene, hexachlorobutadiene, N-nitrosodimethylamine¹, pentachlorophenol, tert-butyl-4-methylphenol(t-BPC), and total difluorobenzene -- with concentrations or SQLs above the RECAP SO SS. These constituents were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Tank RV-10 - As a part of the closure plan, a subsurface investigation was performed at the area surrounding Tank RV-10 in November 2006 and January 2007. Tank RV-10 is located in the Sulfur Recovery Unit of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents in select soil samples collected from the shallow soil (0-15 feet below ground surface (bgs)) with concentrations or SQLs that exceeded the limiting soil RECAP Screening Option Screening Standard (SO SS) -- iron, 2(3H)-benzothiazolethione, benzenethiol, and N-nitrosodiphenylamine. The soil constituents that exceeded the SO SS were further evaluated under the RECAP Management Option - 1 (MO-1), and none exceeded the MO-1 standard.

Analytical results from borehole water samples collected from the area of investigation indicated fourteen constituents in select samples with concentrations or SQLs above the RECAP SO SS -- arsenic, barium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethione, benzenethiol, benzothiazole, methylbenzothiazole, N-nitrosodiphenylamine, pentachlorophenol, and total difluorobenzene. The constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Former Incinerator - As a part of the closure plan, a subsurface investigation was performed at the area surrounding the former incinerator in November 2006 and January 2007. The former incinerator was located in the Sulfur Recovery Unit of the Geismar Facility. Both soil and

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Deleted: Tank PV-42 - As a part of the closure plan, a subsurface investigation was performed at Tank PR-42. Both the soil and groundwater samples indicate contamination. Soil contaminants include: 2(3H)-Benzothiazolone, 2(3H)-benzothiazolethione, Benzenethiol, N-nitrosodiphenylamine, and elevated levels of iron. Groundwater contaminants include: 2(3H)-Benzothiazolethione, 2(3H)-Benzothiazolethione, 4-Bromophenyl phenyl ether, Benzenethiol, Benzo(a)pyrene, benzothiazole, bis(2-ethylhexyl)phthalate, Hexachlorobenzene, Hexachlorobutadiene, methylbenzothiazole, N-nitrosodimethylamine, Pentachloropheno, difluorobenzene and elevated levels of arsenic, barium, cadmium, iron, lead nickel, and vanadium.¶

¶ Tank PR-202 - As a part of the closure plan, subsurface investigation was performed at Tank PR-202. Both soil and groundwater samples indicate contamination. Soil contaminants include: Benzenethiol, N-nitrosodiphenylamine, tert-butyl-4-methylphenol (t-BPC) and high levels of iron. Groundwater contaminants include: 2(3H)-Benzothiazolethione, 2(3H)-benzothiazolethione, tert-butyl-4-methylphenol (t-BPC), and elevated levels of arsenic, barium, beryllium, cadmium, chromium, iron, lead, nickel, vanadium, and zinc.¶

¶ Further investigation of the subsurface is required to determine the lateral and vertical extent of contamination.¶

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borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or sample quantitation limits (SQLs) that exceeded the limiting soil RECAP Screening Option Screening Standards (SO SS) -- iron, 2(3H)-benzothiazolethione, benzenethiol, and N-nitrosodiphenylamine. The soil constituents that exceeded the SO SS were further evaluated under the RECAP Management Option - 1 (MO-1), and none exceeded the MO-1 standard.

Analytical results from borehole water samples collected from the area of investigation indicated fourteen constituents in select samples with concentrations or SQLs that exceeded the limiting groundwater RECAP SO SS -- arsenic, barium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethione, benzenethiol, benzothiazole, methylbenzothiazole, N-nitrosodiphenylamine, pentachlorophenol, and total difluorobenzene. The constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Tank PV-525 - As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PV-525 in January 2007. Borehole water from boring 3 indicated the presence of n-hexane, 2-methylnaphthalene, 4-nitroaniline and dibenz(a,h)anthracene above applicable RECAP screening standards. The Geismar Facility is in the process of identifying a path forward to address these constituent concentrations.

Drum Storage Pad - As a part of the closure plan, a subsurface investigation was performed at the Drum Storage Pad. A closure certification has not yet been submitted to LDEQ.

Because N-nitrosodimethylamine was not detected above its SQL in any soil or borehole water samples collected from within this area of investigation, and its calculated SS values are much lower than the SQL, it was requested in the RECAP report submitted with the closure certification for this tank that the maximum SQL for this constituent be accepted as the SS in place of the calculated SS value.

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TABLE 2. SUMMARY OF CLOSURE AND/OR CORRECTIVE ACTION ACTIVITIES

| AOC or SWMU Number/Area Name | AOC/SWMU Description | Status of Activity | Corrective Action | EDMS Document ID #/Approval Date |
|--|----------------------|---|-------------------|-------------------------------------|
| SWMU 5: Flexzone Tar Truck Unloading Area/Sulfur Recovery Unit (SRU) | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11e: Flexzone Sump/SRU | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 16: Toluene Tar Tank/SRU | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 10: Monochem Landfill | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11a: Celogen OT Sump/Celogen OT Unit | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11b: BHT/B9 Sump/BHT Area | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11c: Flexzone Pond/Flexzone Unit | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11d: UDMH Sump/UDMH Area | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |

| AOC or SWMU Number/Area Name | AOC/SWMU Description | Status of Activity | Corrective Action | EDMS Document ID #/Approval Date |
|--|-------------------------|--|----------------------|--|
| SWMU 11F: Neutralization Sump/Flexzone Unit | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11g: Thiazoles Sump/Thiazoles Unit | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU FP: Fire Pond Drum Area | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU EDC: EDC Storage Vessel/Celogen OT Unit | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU SWB: Sulfur Washout Basin/Thiazoles Area | Soil/Groundwater | Addendum to August 2007 RCRA RECAP/Phase II RFI submitted March 13, 2008 | TBD ¹ | 36769178 |
| SWMU HBT: High-Boiling Tar Drumming Area Sump/Thiazoles Area | Soil/Groundwater | Addendum to August 2007 RCRA RECAP/Phase II RFI submitted March 13, 2008 | TBD ¹ | 36769178 |
| SWMU DTF: Deepwell Tank Farm Sump/Deepwell Tank Area | Soil/Borehole Water | Investigation Pending | TBD ¹ | |
| AOC BMAT: Former Bay Minette Acid Tank/Flexzone Unit | Soil/Borehole Water | Investigation Pending | TBD ¹ | |
| AOC A: Rail Spot 18 | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |

| AOC or SWMU Number/Area Name | AOC/SWMU Description | Status of Activity | Corrective Action | EDMS Document ID #/Approval Date |
|---|-----------------------------|---|-------------------|-------------------------------------|
| AOC D: Process Area Storm Water Drainage System | Soil/Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| Tank PV-42/Thiazoles Area | Soil/Borehole Water | Closure Certification/verification mailed April 7, 2008 | TBD ¹ | 36718995 |
| Tank RV-10/SRU | Soil/Borehole Water | Closure Certification/verification mailed April 7, 2008 | TBD ¹ | |
| Tank PR-202/BHT/UDMH Area | Soil/Borehole Water | Closure Certification/verification mailed April 7, 2008 | TBD ¹ | 36718995 |
| Former Incinerator/SRU | Soil/Borehole Water | Closure Certification/verification mailed April 7, 2008 | TBD ¹ | 36718995 |
| Tank PV-525/Trilene Area | Soil/Groundwater | Closure Certification/verification Mailed May 6, 2008 | TBD ¹ | 36812094 |
| Drum Storage Pad/Deepwell Tank Area | Information to be Completed | Further investigation pending Awaiting submittal of closure certification/verification | TBD ¹ | |

¹ "To be Determined" - Any need for corrective action will be determined subsequent to the completion of the CAS Investigation Workplan (RFI Phase II) and the Administrative Authority's approval of the Phase II RFI RECAP report and addenda thereto submitted in February 2008, March 2008, and August 2008.

**APPENDIX 2 of the Responsiveness Summary (A
compare document to show the difference between the
Appendix 1 of the CAS in the Draft Permit and the
version in the Final Permit.)**

APPENDIX 1

SUMMARY OF CORRECTIVE ACTION ACTIVITIES

The intent of Appendix 1 is to provide an overview of the history and current status of the SWMUs, AOCs, closure activities and/or corrective action activities process at the site at the time of issuance of the final permit and may not necessarily provide a definitive regulatory determination for a particular SWMU or ~~of~~ AOC. The classification of an individual SWMU or AOC is subject to change by the LDEQ Administrative Authority based on future geological/hydrogeological conditions and future available information available to the LDEQ Administrative Authority.¹

IDENTIFICATION OF SWMUs, AOCs AND CORRECTIVE ACTION ACTIVITIES TO DATE

The United States Environmental Protection Agency (EPA) conducted a preliminary review and inspection and issued a RCRA Facility Assessment (RFA) in August 1987 that identified 26 SWMUs and 7 AOCs. The Geismar Facility conducted a waste analyses and release investigation on 17 SWMUs and 3 AOCs in late 1990 and early 1991 to address the items that were listed in the RFA. The goal of the preliminary investigation was to determine the medias affected, to characterize the waste and constituents in question, and to identify the releases to the environment. The findings were reported to EPA in a report dated April 17, 1991. A RCRA Facility Investigation (RFI) work plan was submitted to EPA on July 18, 1991. EPA approved the RFI work plan and the preliminary report on September 25, 1991. Phase I of the RFI was conducted to determine whether a SWMU or AOC released hazardous waste constituents into the environment; and if they have released, what constituents of concern (COCs) were released. The RFI Phase I investigation took place between January and June 1992. LDEQ received the RFI Phase I report on December 3, 1992 and approved the Phase I interim report on March 30, 1998. After the Phase I report the number of SWMUs was reduced to 12 and the number of AOCs was reduced to 2. Two additional SWMUs were discovered following the completion of the Phase I RFI report, the Fire Pond Drum Area and EDC Storage Vessel, which were included in the Phase II RFI investigation. The Phase II RFI was conducted to further delineate the extent of the contamination. The Phase II RFI work plan was submitted to LDEQ in February 2001 and was approved November 2, 2006. The Phase II RFI work plan identified 12 SWMUs and two AOCs for investigation at the site that potentially contained soil and/or groundwater constituents that exceeded the applicable RECAP screening standards developed for each SWMU/AOC. The Phase II RFI work was conducted between December 2006 and January 2007. The Phase II RFI report was submitted to the LDEQ in August 2007. The 12 SWMUs and two AOCs investigated during the Phase II RFI are discussed below.

The Sulfur Recovery Unit (SRU): The SRU(SRU); includes three SWMUs: SWMUs, SWMUs 5 (Flexzone Tar Truck Unloading Area), 11e (Flexzone Sump), and 16 (Toluene Tar Tank or Flexzone Flexzone Tank). The original Flexzone sump and tank have been replaced and a secondary containment has been installed around the entire area. The areas are described below:

SWMU 5: The Flexzone Tar Truck Unloading Area is approximately 10 feet east of the Toluene Tar Tank in the northwest corner of the facility. The area is used to offload toluene tar, which is transferred by truck from the process unit. The Flexzone Tar Tank Unloading Area has been in operation since 1975.

SWMU 11e: The Flexzone Sump is located between the Toluene Tar Tank Unloading Area and the Toluene Tar Tank. It was designed to collect excess tar from the Toluene Tar Tank. The sump was constructed below grade with concrete and was replaced in kind in 1988.

SWMU 16: The Toluene Tar Tank was a carbon steel tank used to store the Flexzone toluene tars prior to disposal off-site. The tank was originally constructed in 1974 and was replaced in kind in the late 1980's with Tank RV-10. Tank RV-10 has a capacity of 13,000 gallons, is constructed aboveground, and is horizontally oriented. The dimensions of the tank are approximately 9 feet in diameter and 27 feet in length. The tank is heated and maintained under a nitrogen blanket with back-pressure control system at 25 lbs per square inch (psi).~~psi~~

Soil and groundwater samples collected from these SWMUs within the SRU during the Phase II RFI did not exhibit constituent concentrations or sample quantitation limits (SQLs) in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a No Further Action-At This Time (NFA-ATT) determination is pending the LDEQ's review.

SWMU 10: The Monochem Landfill is located in Section 11-T10A-R2E, southwest of the facility and within 300 feet of the Mississippi River levee. The Monochem Landfill occupies approximately 9 acres and has a shallow groundwater monitoring network around its perimeter.

SWMU 11a: The Celogen OT Sump is an open top, below grade structure constructed of concrete and covered with a metal grate. The Celogen OT Sump is a part of the Celogen OT Unit process wastewater collection system. The process wastewaters generated by the unit are aqueous and contain dissolved ~~1,2-dichloroethane~~ 1,2-dichloroethene (EDC). In the early 1990's, the initial RFI of SWMU 11a was conducted. The findings from the initial RFI prompted a supplemental assessment to delineate groundwater beneath the SWMU. A supplemental assessment was conducted in 1999. The investigations revealed that EDC concentrations were present in shallow soil and groundwater within a localized area beneath the Celogen OT Unit. Interim corrective actions conducted for the Celogen OT Sump SWMU involved a dual phase extraction pilot study on monitoring wells OT-1 and OT-6 (groundwater samples extracted from these wells contained the highest dissolved EDC concentrations) to determine the effectiveness of simultaneously mitigating the unsaturated zone and the shallow water bearing zone (Zone III). This extraction procedure was conducted once a month from September 2006 until March 2007 for approximately 8 hours each event. Analyses of groundwater samples collected from six monitoring wells installed in the Celogen OT Unit (wells OT-1 through OT-6) indicated a reduction in the dissolved EDC concentrations in four of the six wells (perimeter wells OT-2 through OT-5). EDC concentrations fluctuated throughout the duration of the pilot study, implying that dissolved

EDC from areas surrounding the wells was being recovered by the wells. The Geismar Facility is exploring various options, including an extended trialA dual phase extraction program will continue at the Celogen OT Unit in an attempt to further mitigate EDC concentrations in soil and groundwater at the Celogen OT Unit.

SWMU 11b: The BHT/B9 Sump is a concrete sump which is partially below grade, with lateral dimensions of approximately 18 feet by 11 feet; a narrow metal grate is the only opening of the surface. The sump is part of the process wastewater collection system for the BHT process unit. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU 11c: The Flexzone Pond is inactive (closed in 2003). The Flexzone pond was a below-grade concrete sump approximately 9 feet deep, with lateral dimensions of 40 feet by 50 feet. In the spring of 2003, the pond was cleaned by removing approximately 587,558 pounds of material. The empty structure was partially filled with a fluid material (a concrete mixture).

During a subsurface assessment in close proximity to the closed former Flexzone Pond in 2004, a localized light non-aqueous phase liquid (LNAPL) was discovered on the exterior of the former Flexzone Pond near the southwest corner at a depth of approximately 7 feet below ground surface (bgs). Monitoring wells were installed during the January 2007 RFI to help define the extent of the COCs in the groundwater in the vicinity of the LNAPL. Analytical results confirmed that the LNAPL is isolated to an area immediately adjacent to the former Flexzone Sump.

SWMU 11d: The UDMH Sump is a below grade concrete sump with lateral dimensions of approximately 10 feet by 10 feet. The sump is used to temporarily store process water from the BHT production unit. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU 11f: The Neutralization Sump is a below-grade concrete sump, located toward the center of the Geismar Facility near the Flexzone Unit. The sump is part of the process wastewater collection system and is used to neutralize process water through the addition of either acid or caustic, as needed. Soil and groundwater samples collected from this SWMU during the Phase II RFI did not exhibit COC concentrations or SQLs in excess of the limiting RECAP standards developed for this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU 11g: The Thiazole Sump collects process wastewater from the Thiazole Unit. The sump is constructed and is set below grade, although the upper portions of the sump are above grade. Two temporary monitoring wells at SWMU 11g yielded turbid borehole water samples which, when analyzed, had concentrations of dibenz(a,h)anthracene that exceeded the limiting RECAP standard. Two new monitoring wells with pre-packed screens were

installed in January/February 2008. Samples collected from these 2 new monitoring wells reported constituent concentrations below all applicable RECAP standards. These results were reported to the LDEQ in a February 2008 RECAP addendum. The Geismar Facility's request for a NFA-ATT determination for this SWMU is pending the LDEQ's review.

SWMU FP: The Fire Pond Drum Area was situated on the southern and western exterior of the Fire Pond. It contained buried drums and debris that were removed. Corrective action activities were completed in January 2007 throughout the removal and off-site disposal of approximately 5,500 cubic yards of material. Analyses of samples collected from the bottom and sides of the excavated area indicated that the corrective action effectively mitigated this SWMU. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

SWMU EDC: The EDC Storage Vessel is a 12,000 gallon storage vessel that was put into service at the Geismar facility in 1981. The EDC Storage Vessel is constructed of steel, is cylindrical in shape, horizontally oriented above the ground on concrete "saddles" and is constructed within a concrete secondary containment system. The vessel is located in the western portion of the Geismar Facility.

A limited investigation of the EDC Storage Vessel was conducted in the late 1990's after an accidental overflow of rinse water from the vessel. The limited assessment indicated detectable concentration of EDC in shallow soil and borehole water samples collected from beneath the secondary containment area for the vessel. The Geismar Facility is exploring various options, including a trial dual phase extraction program similar to that employed at the Celogen OT Unit, to mitigate EDC concentrations at the EDC Storage Vessel.

AOC-A: Rail Spot 18 - The Geismar Facility's surface water runoff control system is designed to separate process area stormwater runoff from the general area (non-contact) stormwater runoff. AOC-A is a stormwater ditch. The ditch segment of interest is approximately 100 feet long and 20 feet wide. This ditch receives runoff from the Rail Spot Unloading Area, the vacant area north of the Rail Spot and the occasional overflow runoff from the Flexzone Tank Farm area during periods of heavy rain. Soil and groundwater samples collected from this AOC during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this AOC. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review.

AOC-D: Process Area Stormwater Drainage System (Chemical Process Area) - The stormwater drainage system within the chemical process areas of the Geismar Facility is designed to transport contact stormwater from the process area. Soil and groundwater samples collected from the AOC during the Phase II RFI did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for this AOC. The Geismar Facility's request for a NFA-ATT determination is pending the LDEQ's review. ~~stormwater from the process area.~~

~~The United States Environmental Protection Agency conducted a preliminary review and inspection and issued a RFA in August 1987 that identified 26 SWMUs and 7 AOCs. Lion~~

~~conducted a waste analyses and release investigation on 17 SWMUs and 3 AOCs in late 1990 and early 1991 to address the items that were listed in the RFA. The goal of the preliminary investigation was to determine the medias effected, to characterize the waste and constituents in question, and to identify the releases to the environment. The findings were reported to EPA in report dated April 17, 1991. A RFI work plan was submitted to EPA on July 18, 1991. EPA approved the RFI work plan and the preliminary report on September 25, 1991. Phase I of the RFI was conducted to determine whether a SWMU or AOC released hazardous waste constituents into the environment, and if they have released, what COCs were released. The RFI Phase I investigation took place between January and June 1992. Lion submitted to LDEQ the RFI Phase I report on December 3, 1992 and approved the Phase I interim report on March 30, 1998. After the Phase I report the number of SWMUs was reduced to 12 and the number of AOCs was reduced to 2. Two additional SWMUs were discovered following the completion of the Phase I RFI report, the Fire Pond Drum Area and EDC Storage Vessel, which were included in the Phase II RFI investigation. The Phase II RFI was conducted to further delineate the extent of the contamination. The Phase II RFI work plan was submitted to LDEQ in February 2001 and was approved November 2, 2006. Two new SWMUs, the Sulfur Washout Basin (SWB) and the High-Boiling Tar Drumming Area Sump (HBT), were discovered in November 2007 after the Phase II RFI was completed.~~

SWMU SWB (Sulfur Washout Basin): The SWB was in the Thiazoles Unit and Phase II RFI work was conducted between December 2006 and January 2007.

~~Lion is currently awaiting approval of the RFI Phase II report by LDEQ. The Phase II RFI work plan identified 12 SWMUs and two AOCs for investigation at the site that potentially contained soil and/or groundwater constituents that exceeded the RECAP Screening Option Screening Standard (SO SS).~~

~~**SWMU SWB** — Sulfur Washout Basin — The SWB received washout from pumps that contained sulfur and residual carbon disulfide.~~

SWMU HBT (—High-Boiling Tar Drumming Area Sump): The—the HBT was located in the Thiazoles Unit of the Geismar Facility and collected stormwater runoff and washdowns from an area that was used to drum high-boiling tar wastes.

~~The SWMUs SWB and HBT were discovered in November, 2007; the two SWMUs were excavated and the surrounding soil was removed. Surface investigation for SWMUs SWB and HBT took place in January 2008 and was consistent with the 2003 RECAP and the work plan approved by LDEQ in November 2006. Soil and borehole water samples collected from these two new SWMUs did not exhibit constituent concentrations or SQLs in excess of the limiting RECAP standards developed for these SWMUs. The results of the investigation were submitted to the LDEQ in a March 2008 RFI Addendum. The Geismar Facility's request for a NFA-ATT for the SWB and HBT SWMUs is pending the LDEQ's review. Work Plan approved by LDEQ in November 2006.~~

All of the information regarding SWMU 5, SWMU 11e, SWMU 16, SWMU 10, SWMU 11a, SWMU 11b, SWMU 11c, SWMU 11d, SWMU 11f, SWMU 11g, SWMU FP, SWMU

EDC, AOC A, and AOC D was taken from the August 2007 RFI/RECAP report. The information regarding SWMU SWB and SWMU HBT was taken from the March 13, 2008 RFI/RECAP Addendum. The Geismar Facility is currently awaiting approval of the August 2007 RFI Phase II report and the RFI Addenda reports submitted in February and March 2008.

A new SWMU, the Deepwell Tank Farm Sump (DTF), and a new AOC, the Former Bay Minette Acid Tank (BMAT), were discovered and identified by the Geismar Facility in May 2008. The Deepwell Tank Farm was located within an earthen berm and drained to a 4 x4x4 foot concrete sump, which was the collection point for any spills of non-hazardous wastewater that historically may have originated from the deepwell tanks. The Former Bay Minette Acid Tank was used in the Facility's wastewater treatment system for neutralization.

Upon completing WV-01 wastewater tank decommissioning, personnel at the Geismar Facility commenced the cleanout of the associated Deepwell Tank Farm Sump, at which time they discovered visual staining of soil surrounding the sump. An attempt was made to excavate the discolored soil, but visual signs of discoloration still remained.

In the process of removing the secondary containment around the Former Bay Minette Acid Tank, personnel at the Geismar Facility discovered discolored (yellow) soil below the removed containment. Personnel at the Geismar Facility attempted to remove the discolored area by excavating the first 3 feet of soil from an approximate 2,500 square foot area. It was determined that the excavation was not sufficient to remove all potentially impacted areas, and the project was terminated. Further investigation activities at the DTF and the BMAT were conducted the week of July 26, 2008 and results were pending at the time this permit was issued.

CLOSURE ACTIVITIES TO DATE

The following were identified in the Geismar Facility's hazardous waste permit application and were accorded interim status by the LDEQ and have recently been closed. The closures of these tanks and the former incinerator units were approved by the LDEQ in correspondence dated April 7, 2008, and the approval of the subsurface surrounding each is pending review, making each a SWMU.

Tank PV-42: As a part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PV-42 in January 2007. Tank PV-42 is located in the Thiazoles Area of the Geismar Facility. Both the soil and borehole groundwater samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated five constituents in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or SQLs that exceed the soil RECAP Screening Option Screening Standards (SO SS) -- iron, indicate contamination. Soil contaminants include: 2(3H)-benzothiazolone, Benzothiazolone, 2(3H)-benzothiazolethionene, benzenethiol, and Benzenethiol, N-nitrosodimethylamine. These soil

constituents were further evaluated under the RECAP MO-1 and/or MO-2. Only one constituent (benzenethiol) was detected in one shallow soil sample (0 to 2 feet bgs) at one of the soil boring locations at a concentration above the limiting RECAP standard developed for the area investigated around the tank. The tank and the area immediately surrounding the tank were inspected during the investigation activities. The tank's secondary containment system was intact and showed no evidence of leaks or spills from the tank. Based on the operational history of the tank (an aboveground tank placed on footings that elevate the bottom of the tank above the surrounding surface, used to store spent methanol, located within a concrete secondary containment with no evidence of leaks or spills from the tank), there is no evidence that the constituent benzenethiol is associated with the tank.

Analytical results from borehole water samples collected from the area of investigation indicated 20 constituents in select samples with concentrations or SQLs that exceeded the groundwater RECAP SO SS - arsenic, barium, cadmium, iron, lead, nickel, vanadium, N-nitrosodiphenylamine, and elevated levels of iron. Groundwater contaminants include: 2(3H)-benzothiazolethione, 2(3H)-Benzothiazolethionene, 2(3H)-benzothiazolethionene, 4-bromophenyl 2(3H)-Benzothiazolethione, 4-Bromophenyl phenyl ether, benzenethiol, benzo(a)pyrene, Benzenethiol, Benzo(a)pyrene, benzothiazole, bis(2-ethylhexyl)phthalate, bis(2-ethylhexyl)phthalate, hexachlorobenzene, hexachlorobutadiene, methylenethiazole, Hexachlorobenzene, Hexachlorobutadiene, methylbenzothiazole, N-nitrosodimethylamine, pentachlorophenol, and total difluorobenzene. These borehole water constituents were further evaluated under the RECAP MO-1 and/or MO-2, as applicable, and none exceeded these standards. Pentachloropheno, difluorobenzene and elevated levels of arsenic, barium, cadmium, iron, lead, nickel, and vanadium.

Tank PR-202: As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PR-202 in January 2007. -As a part of the closure plan, a subsurface investigation was performed at Tank PR-202 is located in the Unsymmetrical Dimethylhydrazine (UDMH)/Butylated Hydroxytoluene (BHT) Area within the southwestern portion of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents (iron, benzenethiol, N-nitrosodimethylamine, and groundwater samples indicate contamination. Soil contaminates include: Benzenethiol, N-nitrosodiphenylamine, tert-butyl 4-methylphenol (t-BPC) and high levels of iron. Groundwater contaminants include: 2(3H)-Benzothiazolethione, tert-butyl-4-methylphenol(t-BPC)) in select soil samples collected from the shallow soil (0-15 feet bgs) with concentrations or SQLs that exceeded the limiting soil RECAP SO SS. These soil constituents were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standards.

Analytical results from borehole water samples collected from the area of investigation indicated 20 constituents in select samples - (t-BPC), and elevated levels of arsenic, barium, beryllium, cadmium, chromium, iron, lead, nickel, vanadium, zinc, 2(3H)-benzothiazolethione, benzenethiol, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, hexachlorobenzene, hexachlorobutadiene, N-nitrosodimethylamine, pentachlorophenol, tert-butyl-4-methylphenol(t-BPC), and total difluorobenzene, with concentrations or SQLs above

the RECAP SO SS. These constituents were further evaluated under RECAP MO-1, and none exceeded the MO-1 standard and zinc.

Tank RV-10: Further investigation of the subsurface is required to determine the lateral and vertical extent of contamination.

Former Incinerator: As a part of the closure plan, a subsurface investigation was performed at the area surrounding Tank RV-10 in November 2006 and January 2007. Tank RV-10 is located in the Sulfur Recovery Unit of the Geismar Facility, former incinerator. Both soil and borehole groundwater samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents in select soil samples collected from the contamination. Soil contaminants were found in shallow soil (0-5, down to 15 feet bgs) with concentrations or SQLs that exceeded the limiting soil RECAP SO SS- iron, (total depth of sampling) and include: 2(3H)-benzothiazolethione, benzenethiol, Benzothiazolethione, Benzenethiol, N-nitrosodiphenylamine, and N-nitrosodiphenylamine. The soil constituents that exceeded the SO SS were further evaluated under the RECAP MO-1 and none exceeded the RECAP MO-1 standard.

Analytical results from borehole water samples collected from the area high levels of investigation indicated fourteen constituents in select samples with concentration or SQLs above the RECAP SO SS- arsenic, barium, iron, lead, nickel, vanadium, iron. Groundwater contaminants include 2(3H)-benzothiazolone, 2(3H)-Benzothiazolone, 2(3H)-benzothiazolethione, benzenethiol, 2(3H)-Benzothiazolethione, Benzothiazole, Methyl benzothiazole, methylbenzothiazole, N-nitrosodiphenylamine, pentachlorophenol and elevated levels of arsenic, iron, lead, nickel, and total difluorobenzene. The constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard. vanadium.

Former Incinerator: Tank PV-525: As part of their closure plan, a subsurface investigation was performed at the area surrounding the former incinerator in November 2006 and January 2007. The former incinerator was located in the Sulfur Recovery Unit of the Geismar Facility. Both soil and borehole water samples were collected and analyzed for the constituents of concern listed in the closure plan.

Analytical results from the area of investigation indicated four constituents in select soil samples collected from the shallow soils (0-15 feet bgs) with concentrations or SQLs that exceeded the limiting soil RECAP SO SS- iron, 2(3H)-benzothiazolethione, benzenethiol, and N-nitrosodiphenylamine. The soil constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Analytical results from borehole water samples collected from the area of investigation indicated fourteen constituents in select samples with concentrations or SQLs that exceeded the limiting groundwater RECAP SO SS- arsenic, barium, iron, lead, nickel, vanadium, 2(3H)-benzothiazolone, 2(3H)-benzothiazolethione, benzenethiol, benzothiazole, methylbenzothiazole, N-nitrosodiphenylamine, pentachlorophenol, and total difluorobenzene.

The constituents that exceeded the SO SS were further evaluated under the RECAP MO-1, and none exceeded the MO-1 standard.

Tank PV-525: As part of the closure plan, a subsurface investigation was performed at the area surrounding Tank PV-525 in January 2007. Borehole — Groundwater from boring 3 indicated the presence of n-hexane, 2-methylnaphthalene, 4-nitroaniline4-nitoraniline and dibenz(a,h)anthracenedibenz(a,h)athracene above applicable RECAP screening standards. The Geismar Facility is in the process of identifying a path forward to address these constituent concentrations.

~~Additional groundwater samples outside boring 3 are required to define the area of contamination.~~

~~**Drum Storage Pad:Pad** As a part of the closure plan, a subsurface investigation was preformed at the Drum Storage Pad. A closure certification has not yet been submitted to LDEQ. been submitted to LDEQ; however conversations with the facility indicated similar contamination to the Tanks and Former Incinerator areas listed above.~~

~~[†]All of the information regarding SWMU 5, SWMU 11e, SWMU 16, SWMU 10, SWMU 11a, SWMU 11b, SWMU 11c, SWMU 11d, SWMU 11f, SWMU 11g, SWMU FP, SWMU EDC, AOC A, and AOC D was taken from the September 6, 2007 RFI/RECAP report. The information regarding SWMU SWB and SWMU HBT was taken from March 13, 2008 RFI/RECAP Addendum.~~

TABLE 2. SUMMARY OF CORRECTIVE ACTION ACTIVITIES

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|-----------------------------|--|------------------------------|--|
| SWMU 5: Flexzone Tar Truck Unloading Area/Sulfur Recovery Unit (SRU) | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11e: Flexzone Sump/SRU | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 16: Toluene Tar Tank /SRU(Flexzone Tank: Tank RV-10) | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 10: Monochem Landfill | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11a: Celogen OT Sump/Celogen OT Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11b: BHT/B9 Sump/BHT Area | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11c: Flexzone Pond/Flexzone Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU 11d: UDMH Sump/UDMH Area | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU-11f: Neutralization Sump/Flexzone Unit | Soil/ Groundwater | RECAP/Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|-----------------------------|---|------------------------------|--|
| | | | | |
| SWMU 11g: Thiazoles Sump/Thiazoles Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU FP: Fire Pond Drum Area | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU EDC: EDC Storage Vessel/ Celogen OT Unit | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| SWMU SWB: Sulfur Washout Basin/Thiazoles Area | Soil/ Groundwater | Addendum to August 2007 RCRA RECAP/Phase II RFI submitted March 13, 2008 | TBD ¹ | 36769178 |
| SWMU HBT: High- Boiling Tar Drumming Area Sump/ Thiazoles Area | Soil/ Groundwater | Addendum to August 2007 RCRA RECAP/Phase II RFI submitted March 13, 2008 | TBD ¹ | 36769178 |
| SWMU DTF: Deepwell Tank Farm Sump/ Deepwell Tank Area | Soil/ Groundwater | Investigation Pending | TBD ¹ | |
| AOC BMAT: Former Bay Minette Acid Tank/ Flexzone Unit | Soil/ Groundwater | Investigation Pending | TBD ¹ | |
| | | | | |

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|---|-----------------------------|---|------------------------------|--|
| AOC A: Rail Spot 18 | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| AOC D: Process Area Storm Water Drainage System | Soil/ Groundwater | RECAP/ Phase II RFI Report submitted September 6, 2007 | TBD ¹ | Part 1 36259515; Part 2 36259615 |
| Tank PV-42/Thiazoles Area (SWMU number will be added once it is given by Lion) | Soil/ Groundwater | Closure Certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Tank RV-10/SRU Tank PR-202 (SWMU number will be added once it is given by Lion) | Soil/ Groundwater | Closure Certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Tank PR- 202/BHT/UDMH Area Former Incinerator (SWMU number will be added once it is given by Lion) | Soil/ Groundwater | Closure Certification/verification mailed April 7, 2008. Further investigation needed. | TBD ¹ | 36718995 |
| Former Incinerator/SRU Tank PV- 525 (SWMU number will be added once it is given by Lion) | Soil/ Groundwater | Closure certification/verification mailed April 7, May-6; 2008. Further investigation needed. | TBD ¹ | 3671899536812094 |
| Tank PV-525/Trilene | Soil/ | Closure | TBD ¹ | 36812094 |

| <i>AOC or SWMU Number/Area Name</i> | <i>AOC/SWMU Description</i> | <i>Status of CA Activity</i> | <i>Corrective Action</i> | <i>EDMS Document ID #/ Approval Date</i> |
|--|--|--|------------------------------|--|
| <u>Area Drum Storage Pad</u> | <u>Groundwater Information to be Completed</u> | <u>certification/verification mailed May 6, 2008. Further investigation pending. Information to be Completed</u> | | |
| <u>Drum Storage Pad/Deepwell Tank Area</u> | <u>Information to be Completed</u> | <u>Awaiting submittal of closure certification/verification</u> | <u>TBD'</u> | |

1. "To be Determined". Any The need for corrective action will be determined subsequent to the completion of the CAS Investigation Work Plan (RFI Phase II) and the LDEQ's Administrative Authority's approval of the RECAP report and addenda.